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ABSTRACT

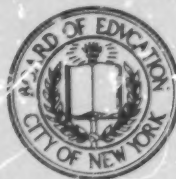
The resource guide suggests activities to help special education students make appropriate choices about their nutritional habits. It is explained that the activities can be infused into other curriculum areas. The guide consists of five themes and includes performance objectives for each: foods eaten at school (planning a school lunch, keeping a lunch diary, making a nutrient mobile); foods eaten at home (identifying a variety of foods, packing lunches, understanding how the body uses food, buying food wisely, recipes for international snacks); foods eaten in restaurants (collecting menus to compare restaurants); foods grown (recipes for snacks, exploring plant growth); and foods eaten by athletes and physically active people (exploring the role of nutrients in growth and development, maintaining physical fitness, planning menus for an athlete). (CL)

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NUTRITION ACTIVITIES RESOURCE GUIDE

BOARD OF EDUCATION OF THE CITY OF NEW YORK



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CURRICULUM DEVELOPMENT UNIT

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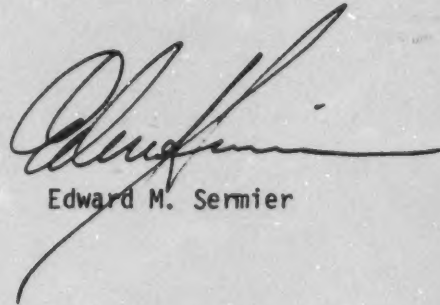
Edward M. Sermier, *Chief Administrator*
Division of Special Education

FOREWORD

Recent studies have demonstrated that nutrition and physical fitness impact on both the growth and learning process. Similarly, other studies have shown that young people have very little understanding of the factors that make for good nutrition and health, preferring instead "junk" food and the sedentary life of TV-watching.

The Division of Special Education is responsible for providing publications and materials helpful to the classroom teacher. This is an ongoing, dynamic process, responsive to the needs and priorities of the educational staff. One such need identified by field staff is the need for nutritional and health-related material for use by classroom teachers.

This Nutrition Activities Resource Guide for Students in Special Education was developed in response to that stated need. It is hoped that the activities in this Guide will enable teachers to assist their students in developing good nutritional habits as well as achieving their maximum potential for physical fitness.



Edward M. Sermier

ACKNOWLEDGMENTS

The Nutrition Activities Resource Guide for Students in Special Education is a project of the Division of Special Education, Edward M. Semmer, Chief Administrator.

The Guide was prepared as a project of the Division of Special Education, Office of Program Development, Curriculum Development Unit, Bebe Bernstein, Administrator.

Lorelle Lawson, Curriculum Development Unit, was the overall project coordinator. Doris Teal and Robin Wohl were the principal writers and Robin Wohl was the project illustrator. Howard Schwach was the project editor.

The Division of Curriculum and Instruction, Charlotte Frank, Executive Director, cooperated in the planning and design of the Guide. Morris Friedman, Director of the Office of Curriculum Development and Support, Sylvia Schecter, Director of the Health and Physical Education Unit, Division of Curriculum and Instruction, and Mel Warren, Assistant Director, Health and Physical Education Unit, offered consultation during the development of the material.

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Rose Marie Ricchetti, Curriculum Development Unit, typed the original manuscript. Clare Powitz, Curriculum Development Unit, was the administrative staff member responsible for preparation for production of this manuscript.

September 1983

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INTRODUCTION

Recent studies have indicated that the basic four food groups have little meaning to students. Rather than grouping foods according to those accented groups, students generally put all food into two categories--sweet and nonsweet. In addition, students often have no understanding of what happens to food after it is eaten. When asked what they would buy to eat if given fifty cents, more than eighty percent of children between the ages of five and eleven questioned indicated that they would buy either candy, ice cream or gum. That statistic should come as no surprise to special education teachers. While many handicapped students need special diets, such students often spend much of their meal and snack time eating chips, ice cream, candy or cookies and drinking sweetened drinks.

Therefore, specialists in the field of nutrition have set specific goals to remediate the problem found in those recent studies. Two common goals for all students in special education are:

1. Developing students' ability to make positive choices about the quality of their own lives.
2. Developing skills which will enable students to function independently within their own limitations in the "real world."

The activities in this Guide are designed to provide students in special education with independent daily living skills which relate to making choices about their eating habits. The activities are also designed to assist students to develop sound nutritional habits, to provide them with the skills necessary for selecting and preparing nutritional meals which fit their individual needs as people, and to develop an awareness of the impact of food costs on the family budget.

The activities in this Guide can be infused into curriculum areas such as health education, science, language arts, mathematics, art, social studies, reading, and career education.

Because many meals are eaten at home, it is important that parents become involved in the student activities detailed in this Guide. Parents work together with their children reinforcing concepts previously learned at school. Parents can be made aware of the Guide and student activities through parent newsletters, from workshops, and by using parents as resource people as indicated on the individual activities.

The activities in this Guide have been selected to meet the following goals:

To assist students in special education classes in understanding the relationship between the food they eat and their total development, functioning, and growth.

To develop in special education students an appreciation of the various types of food available to them in New York City.

To aid students in special education in observing and understanding differences and similarities in the eating patterns of various ethnic groups in our multicultural society.

To assist students in special education in establishing guidelines for selecting those foods which will aid in the development and maintenance of healthy bodies.

To provide students in special education with skills in food shopping and food preparation.

To provide students in special education with background information about how food is grown and produced.

To provide students in special education with information about how various careers are associated with food and nutrition.

The majority of sources for the activities in this Guide are readily available from the New York State Education Department, the commercial food industry, and from institutions of higher education. These are noted in the references and bibliography.

HOW TO USE THIS GUIDE

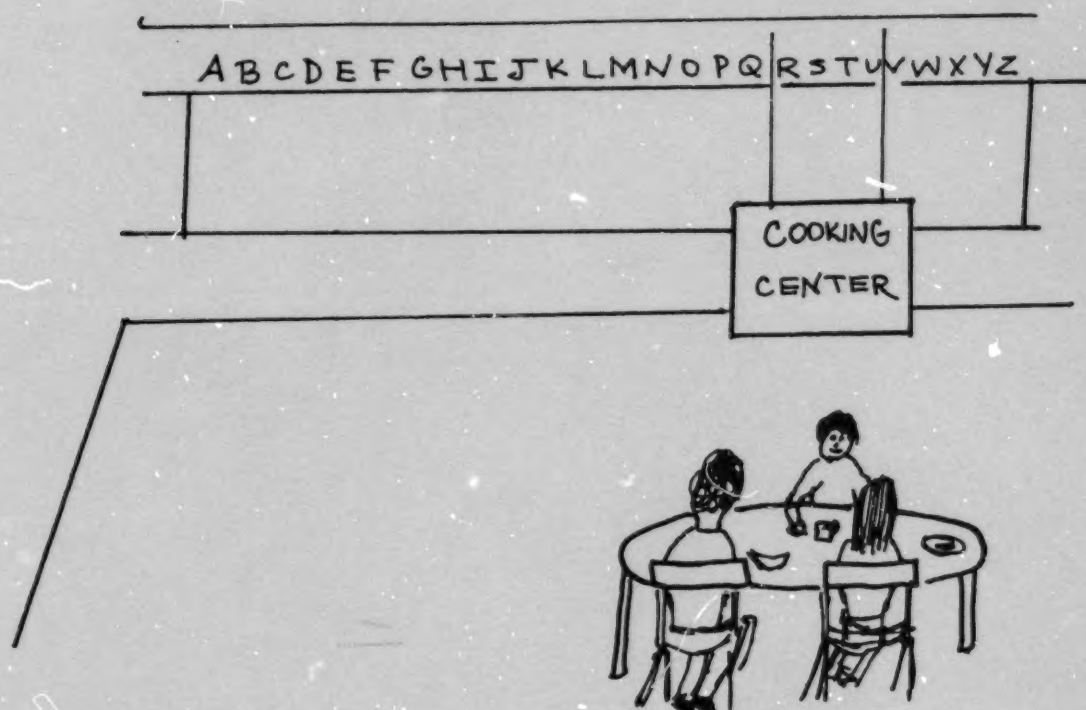
The Nutrition Activities Resource Guide for Students in Special Education consists of five themes: Foods We Eat at School; Foods We Eat at Home; Foods We Eat at Restaurants; Foods We Can Grow; and Foods Athletes and Active People Eat. The grade levels appropriate for each activity are indicated along with each of the performance objectives. It is important to remember, however, that teachers should review an activity to assure that it is appropriate for his or her class. Activities in this Guide may be modified to meet individual needs.

Many of the activities in this Guide are derived or excerpted from materials developed by commercial or educational institutions. The source of that material is indicated along with the performance objectives. Where there is no source indicated for a particular activity, the activity was developed by the teacher-writers who authored this Guide.

It is not necessary to complete each activity in the sequence in which it appears. It is important, however, to read each theme in its entirety before choosing which activities you will use with your class.

Performance objectives listed for each theme can be used as a pre- and post-test to determine mastery of the concepts in this Guide. Test student knowledge of each of the objectives prior to using the activities and after the activities have been completed.

Foods We Eat in School



FOODS WE EAT AT SCHOOL

Many students in elementary special education classes eat at least two meals a day in school. In addition, they often have snacks which are provided by the school cafeteria, the teacher, and/or the parents. This makes the school an ideal place for discovering sound nutritional practices and the ways in which nutritional intake affects growth patterns as well as physical and mental well being.

Often students take services which are provided in the school for granted. They have not explored the question of who actually provides the service. The school food service is a perfect place for students to begin to develop an awareness about the jobs that are done in a school.

The Bureau of Food Services of the New York City Board of Education is committed to upgrading the quality of the school meals and to include in their menus those foods which represent New York City's multicultural neighborhoods. The material in this section addresses that commitment and the commitment of the Division of Special Education to the practical aspects of multicultural education.

The performance objectives for this unit are as follows:

Students will identify those foods served for breakfast and lunch over a one week period of time in the school cafeteria.

Students will invite the school dietician to explain how menus are chosen and why certain foods are served.

Students will categorize those foods served at school according to function and nutritional value.

Students will classify those foods served at school according to which meal-time they are served at.

Students will investigate the methods by which food is purchased by the school cafeteria and in what quantities it is needed.

Students will investigate how various categories of food which are served in the school cafeteria are grown and processed.

Students will determine, through an investigation of one week's menus, whether the school cafeteria serves multiethnic foods and the origin of such foods.

Students will, after consultation with the school dietician, recommend a cafeteria menu for one week's meals.

Students will interview the food service workers in the school in order to find out more about their jobs and the kinds of careers that exist for food service workers in the New York City school system.

FOODS WE EAT AT SCHOOL

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
1. Students will identify those foods served for breakfast and lunch over a one week period of time in the school cafeteria.	1. Have students use the breakfast and lunch diaries to keep track of what they have eaten in the cafeteria. (2-4)	1. The Doofus Stories pp. 151-156
	2. Share the requirements for a class A lunch with your class. A complete listing can be found in performance objective 2 in this module. Have class discuss answers to questions and new vocabulary. (4-6)	2. Health Education Physical Dimensions of Health, K-3 p. 34
	3. Use "Let's Tell the Lunchroom" activity as a motivator for interaction with the lunchroom staff and the rest of the school for a "healthy eating" campaign. (4-6)	3. Nutrition Comes Alive Sheet 111-10
	4. Use the "What I Ate" worksheet for the lower grades to keep track of what they ate in the school cafeteria and the times at which they ate the food. (K-2)	4. Nutrition Comes Alive Sheet J
	5. Students will plan one meal for the student cafeteria using the "Plan A School Lunch" learner activity (Activity #51). (3-6)	5. Health Education Physical Dimensions of Health, K-3 p.36
	6. Students will keep a record of all food served in the school cafeteria for a given week, and will categorize each dish according to calories and origin (i.e., plant, animal). (4-6)	

FOODS AT SCHOOL

Draw and label what you had for breakfast and lunch. Objective 1

Date _____	
Milk	Fruit and Vegetable
Meat and Beans	Bread and Cereal

Date _____	
Milk	Fruit and Vegetable
Meat and Beans	Bread and Cereal

The Doofus Stories: Reprinted with permission from Management Sciences for Health, Boston, Newton Public Schools 1978.

Lunch Diary--Page 2

Draw and label what you had for breakfast and lunch. Objective 1

Date _____	
Milk	Fruit and Vegetable
Meat and Beans	Bread and Cereal

Date _____	
Milk	Fruit and Vegetable
Meat and Beans	Bread and Cereal

Lunch Diary--Page 3

Milk

4					
3					
2	glass				
1	in cereal				
Dates	Example	Day 1	Day 2	Day 3	Day 4

Lunch Diary--Page 4

Meat and Beans

4					
3					
2					
1					
Dates	Example	Day 1	Day 2	Day 3	Day 4

Lunch Diary--Page 5

Fruits and Vegetables

4					
3					
2					
1					
Dates	Example	Day 1	Day 2	Day 3	Day 4



Lunch Diary--Page 6

Bread and Cereal

4					
3					
2					
1					
Dates	Example	Day 1	Day 2	Day 3	Day 4

Let's Tell the Lunchroom!

Here are several ways your class can help educate the rest of the school!

- . In the classroom, ask each child to draw a favorite nutritious meal on a paper plate. Have the class vote on one or two of their favorites. Then, speak with the school food-service director and see if you can have that meal served on some future date!
- . Have your class set up a good protein and/or good calcium snack-tasting stand in the cafeteria. Ask the school food-service people to help supply ingredients. Have fun being innovative!
- . Let's tell everyone about the importance of protein and calcium and the foods that are good sources! Talk with the school food-service director and designate a "Protein Week" and a "Calcium Week." The class can then prepare a cafeteria campaign including--
 - Posters showing foods and menu items high in the featured nutrient or showing what the nutrient does for the body!
 - Displays or mobiles drawing attention to the featured items or the cafeteria line or places in various locations in the cafeteria.
 - Place mats. Design and reproduce fun place mats depicting the featured nutrient, what foods are good sources, and good snack ideas! Use riddles, dot-to-dots, puzzles, and anything else you might think of.

or

- Hold a contest! Have children in all grades enter a contest to draw a placemat for the campaign. Let your class be the judges. Another contest idea is to have students concoct the most unusual or delicious milk drink (without using sugar!).

____ Health Education. Physical Dimensions of Health.



Plan A School Lunch

Activity 51

Have the class plan a menu for the school lunch for a day. The class should develop a way to publicize to others that they planned the menu and which day it is to be served. Records of the numbers of pupils eating the lunch and of the plate waste should be kept. Compare with an average day.

This could also be done with several small groups of students with each group analyzing a menu lacking in a different food group. For example, the following sample is lacking in the bread and cereal group:

3 glasses milk
chopped beef patty
cottage cheese
glass of orange juice
an apple
carrot sticks
peas
tossed salad

This should be a cooperative effort between the class and the director of food services. The director of food services could discuss the requirements for a type A lunch and interpret any restrictions placed on the foods to be served so that the menu planned by the class could be served in the cafeteria. Using the technique of voting on disagreements, a group decision process can be used. This also reinforces the learnings about accepting foods even though they are not favorites.

School Lunch Survey

Activity 47

Study the school lunch menus for the week ahead.

- . Do the menus comply with the requirements for a type A lunch?
- . Is an ala carte menu provided? Is it nutritious?
- . Do the week's menus provide for variety from day to day?
- . How many favorite foods, as listed earlier, are on the menus?
- . How many pupils bring their lunch? What do they generally bring? Are the lunches nutritious?

It will be helpful to establish some criteria as a guide to determine what constitutes a nutritious meal. For example, some ala carte dishes may be nutritious but inadequate if eaten alone.

It is important to place lunches in context with the other meals and snacks that the pupils eat during the entire day.

Vocabulary:

ala carte
cafeteria
candy
dinner
eating

lunch
menus
school
snack
supper

FOODS WE EAT AT SCHOOL

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
2. Students will invite the school dietitian to explain how menus are chosen and why certain foods are served.	1. Distribute the "Foods for Type A School Lunches" sheet to students. Allow them time to look it over. (4-6)	1. U.S. Department of Agriculture, Food and Nutrition service--"A Menu Planning Guide for Type A School Lunches" 1974, p. 10-11
	2. Students will prepare a list of questions for the school dietitian. Questions can be based on class discussion, research, or on the material in this packet. (2-6)	
	3. Students will prepare sample school lunch menus based on what they have learned and discuss their menus with the school dietitian. (4-6)	
	4. Students will take a field trip to a food preparation establishment or center using the Field Trip learner activity (Activity #30) as a guide. (3-6)	4. Health Education Physical Dimensions of Health, p. 28

Foods for Type A School Lunch

Meat and Meat Alternate

Cheese Cheddar Cottage	Dry beans Dry peas	Eggs Dried, whole Frozen whole Shell
Fish and shellfish	Meat--canned, dried, fresh and frozen	Peanut butter
Poultry--canned, dried, fresh and frozen Chicken Turkey	Beef Lamb Pork Veal	Protein-fortified enriched macaroni (when mixed with meat, poultry, fish or cheese)
Textured vegetable protein (when mixed with meat, poultry, or fish)	Variety of meats and luncheon meats Frankfurters Liver and other organ meats Luncheon meats (including bologna, liverwurst)	

Include a Vitamin A Vegetable or
Fruit at Least Twice a Week

Vegetables and Fruits

A 1/4 cup serving

(about 1500 or more International Units of vitamin A)

Beet greens	Carrots	Chard, Swiss
Chilli peppers, red	Collards	Cress, garden
Dandelion greens	Kale	Mangoes
Mixed vegetables (frozen)	Mustard greens	Peas and carrots (frozen)
Pumpkin	Peppers, sweet red	Squash, winter (acorn, butternut, Hubbard)
Sweetpotatoes	Spinach	
	Turnip greens	

A 1/4 cup serving

(about 750-1500 International Units of vitamin A)

Apricots	Broccoli	Cantaloup
Chicory greens	Papayas	Purple plums (canned)

A 1/2 cup serving

(about 750-1500 International Units of vitamin A)

Asparagus, green	Cheeries, red sour	Chili peppers, green (fresh)
Endive, curly	Escarole	Prunes
Nectarines	Peaches (except canned)	
Tomatoes	Tomato juice or reconsti- tuted paste or puree	

Include a Vitamin C Vegetable or
Fruit Several Times a Week

Vegetables and Fruits
A 1/4 cup serving
(about 25 milligrams or more of vitamin C)

Acerola	Broccoli	Brussels sprouts
Chili peppers, red and green	Guavas	Orange juice
Peppers, sweet, red and green	Oranges	Papayas

A 1/4 cup serving
(about 15-25 milligrams of vitamin C)

Cauliflower	Collards	Cress, garden
Grapefruit	Grapefruit juice	Grapefruit-orange juice
Kale	Kohlrabi	Kumquats
Mangoes	Mustard greens	Pineapple juice (canned-- vitamin restored)
Strawberries	Tangerine juice	
Tangerines		

A 1/4 cup serving
(about 8-15 milligrams of vitamin C)

Asparagus	Cabbage	Cantaloup
Dandelion greens	Honeydew melon	Okra
Potatoes (baked, boiled or steamed)	Potatoes (reconstituted instant mashed-- vitamin C restored)	Raspberries, red
Sauerkraut	Tangelos	Rutabagas
Sweetpotatoes (except those canned in Turnips	Tomato juice or reconsti- tuted paste or puree	Spinach
		Tomatoes
		Turnip greens

Include Three Vegetables and Fruits as Needed

Vegetables and Fruits

Apples	Applesauce	Avocados
Bananas	Beans, green or wax	Beans, lima, green
Bean sprouts	Beets	Berries (black, blue, etc.)
Celery	Chinese cabbage	Corn
Cranberries	Cranberry sauce	Cucumbers
Dates	Eggplant	Figs
Fruit Cocktail	Fruits for salads	Grapes
Lettuce	Mixed vegetables (canned)	Mushrooms
Olives	Onions	Parsley
Parsnips	Peaches (canned)	Pears
Peas and Carrots (canned)	Peas, green, immature	Pimientos
	Cowpeas, immature seed	Pineapple

Plums
Raisins
Squash, summer
Fruit juices (apple,
grape, pineapple, etc.)

Potatoes (mashed, fried,
etc.)
Watercress

Radishes
Rhubarb
Watermelon

Bread

(enriched or whole grain)
Group 1 (25 grams)

Bagels
Buns (all types)
French or Vienna
Muffins
Raisin bread
Salt sticks
White bread

Biscuits
Cornbread
"Fry" bread
Pretzels (soft
Rolls
Stuffing (bread)
Whole wheat bread

Boston brown bread
English muffin
Italian bread
Pumpernickel
Rye bread
Syrian bread (flat)

Group 2 (20 grams)

Bread sticks (dry)
"Pilot" bread
Soda crackers

Graham crackers
Rye wafers
Taco shells

Melba toast
Saltine crackers
Zwieback

Group 3 (30 grams)

Dumplings
Meat turnover crust
Popovers
Tortillas

Hush puppies
Pancakes
Sopapillas
Waffles

Meat pie crust
Pizza crust
Spoonbread

Butter or Margarine

Butter

Margarine, fortified with
15,000 I.U. vitamin A per
pound

Milk

Milk, fluid
whole
lowfat
skim

Cultured
buttermilk

OTHER FOODS

Cereal and Cereal Products

Bulgur
Crackers (unenriched)
Macaroni
Rolled wheat and oats

Cornmeal
Flour
Noodles
Spaghetti

Corn grits
Hominy
Rice

Desserts

Cakes
Doughnuts
Puddings

Confections
Ice cream

Cookies
Pastry for pies and
cobblers

Miscellaneous

Bacon
Corn chips
Honey
Jellies
Nuts
Salad dressings
Syrups

Catsup
Cream cheese
Jams
Lard
Pickles
Salt pork
Other similar foods

Chili sauce
Gelatin, plain or
flavored
Molasses
Potato chips and sticks
Shortening

Field Trips

Activity 30

If possible, visit a hospital or other large institution to observe how meals are prepared.

- . Who determines what is to be prepared and how it is prepared?
- . What experience and/or training does this person have in nutrition?
- . What basic factors are taken into account when determining what is to be prepared and how it is served?

Point out the role of the dietician, diet aid, means of transporting food from the kitchen to the patients, methods of serving and other problems that face large institutions.

FOODS WE EAT AT SCHOOL

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
3. Students will categorize those foods served at school according to function and nutritional value.	1. Students will make a chart such as the one on the "An Apple a Day" worksheet and keep track of their meals for one week. (2-6)	1. Bodyworks, p. 182
	2. Use the information sheet detailing the "Four Food Groups" to make students more aware of the four basic groups and their nutrient value. (4-6)	2. The Doofus Stories, pp. 146-147.
	3. Use the "Plan a Menu" worksheet as a guide for planning one school meal utilizing the four food groups. (4-6)	
	4. Distribute and discuss the "Key Nutrient" information sheet. Which foods are best sources for which nutrients? Use the information in discussing the menu planned in Activity #3. (4-6)	4. A Case of Waste, p. 8
	5. Use "Welcome to the Unconventional Snack Bar" to teach the difference between nutritional and nonnutritional snacks. (4-6)	5. National Dairy Council pp.2-6

An Apple a Day

Look at one of your meals--breakfast, lunch, dinner and snacks--to see if you're eating enough foods from each of the Four Food Groups.

1. Make a chart like the one below to keep track of your meals.
2. List the foods and number of servings you eat in each of the Four Food Group categories on your chart. The Four Food Groups Chart in this chapter can help you decide the correct categories.
3. Count up the number of servings you had in each food group for the whole day.
4. Did you eat enough servings in each food group to have a balanced diet for the day? In which groups are you low? How many foods did you have in the "Other" category?

Look at the Four Food Groups Chart for suggestions of foods you can eat to fill your food group needs.

I. FRUITS AND VEGETABLES	orange	pizza: tomato sauce green pepper
II. GRAINS	corn flakes	pizza crust
III. MILK PRODUCTS	milk	pizza cheese
IV. BEANS, NUTS, MEAT & EGGS		pizza sausage
V. OTHER	sugar	

The Big Four

If labels aren't the whole story, how can you choose the foods that have what you need? The Four Food Groups are one answer. The Four Food Groups put similar foods together into categories. Each category or group contains foods that are rich in the same nutrients. These Four Food Groups are easy to recognize--

- I. Fruits and Vegetables
- II. Grains (bread and cereals)
- III. Milk Products
- IV. Beans, Nuts, Meat, and Eggs

Nutritionists have figured out how many servings of each food group you need for a balanced diet. If you eat the right number of servings from each of the four groups each day, you'll meet your nutrient needs. That makes choosing food a lot easier.

It's still not a perfect system. All foods within a group are not exactly the same. Foods within a group can vary in their nutrient values. Some foods within a food group are better choices than others, since they give you the nutrients you need with the least sugar, salt, fat, or processing. For example, milk and ice cream are in the same food group. Ice cream gives you the same kinds of nutrients as milk but fewer of them and lots more sugar and fat that add extra calories per cup.

Some foods are grouped into a fifth category called "Other" because they have few nutrients and offer little more than fat or sugar which add calories. The following chart will help you choose the best foods from each group.

The Doofus Stories

Four Food Groups--Choices for Children

	Any Time	Sometimes	Now and Then
I. Fruits and Vegetables			
Good sources of vitamins A and C, calcium and iron.	Fresh fruits and vegetables Canned fruits (in own juices) Fruit juices (unsweetened) Vegetable juices	Canned fruits (in syrup) Fruit juices (sweetened) Canned vegetables (with salt) Dried fruits like raisins or apricots	French fried potatoes Olives Pickles Potato chips
You need 4 or more servings a day.			
II. Grain (Bread and Cereal)			
Good sources of B vitamins, iron and protein.	Whole grain bread and rolls Oatmeal Pasta (spaghetti, etc.)	Granola cereals (may be high in fat or sugar) White bread (enriched)	
You need 4 or more servings a day.	Rice Whole grain cereals (except granola)	Low sugar cereals	
III. Milk Products			
Good sources of protein, calcium, vitamin A and D, and riboflavin (B vitamin).	Low-fat or skim milk Yogurt (plain) Cottage cheese (plain) Skim milk cheese Buttermilk	Yogurt (sweetened) Frozen yogurt Whole milk Hard cheeses (cheddar, muenster, Swiss, blue, brick)	Processed cheeses (American cheese, etc.) Ice Cream Ice milk Cheesecake
You need 3 to 4 servings a day.			

	Any Time	Sometimes	Now and Then
IV. Beans, Nuts, Meat and Eggs			
Good sources of protein, minerals (like iron) and B vitamins.	Peanut butter Chicken or turkey (no skin) Fish (fresh or frozen) Shellfish Tuna (canned and drained) Dried peas and beans	Eggs Fish (canned, salted, pickled or smoked) Beefsteaks, roasts, stews or hamburger Ham, veal, pork or lamb Chicken or turkey (with skin)	Lunch meats (corned beef, ham, salami, liverwurst, etc.) Hot dogs Sausage Bacon
You need 2 servings a day.			
Other			
		Mayonnaise Salad oils Margarine	Butter/Cream cheese Cream/Sour cream Coconut or palm oil Packaged pastries Doughnuts Juice drinks Soft drinks Candy Deep fried foods
Any Time = any time you like	Sometimes = 2 - 3 times a week	Now and Then = one a week or less	

The Four Groups (cont'd)

Activities:

1. Make food models by pasting magazine pictures on cardboard, or use Dairy Council food models. Sort foods into four food groups.
2. Play food classification games such as "Fish," "Concentration" or "Food Lotto."
3. Play "What am I?" Give clues and guess food and food group.
4. Analyze own breakfasts and suppers for food groups.
5. Analyze own lunches, snacks, suppers for food groups. Make a class bar graph on choices.
6. Give class 15 minutes to list as many foods in each food group as they can.
7. Plan and serve a healthy breakfast in school with parents. Use four tables, one for each food group. Everyone eats something from each table.

Alternatively, bring in some breakfast foods and classify.
8. Find examples of each food group in refrigerator and cupboards at home.
9. Keep a journal of meals and snacks eaten for two days. List food groups of each food and whether from plant or animal in class.
10. Children draw favorite food and least favorite food. Write a few sentences describing it.
11. Students observe a variety of food using all of their senses. Teacher might make a food sounds tape and have children guess the foods.
12. Test for energy nutrients in foods. Use tincture of iodine to test for the presence of starch (see Science Center) and rub food on brown paper and look for oil spot to test for fats.

Resources:

Dairy Council Food Models and "Guide to Good Eating" chart.
Creative Food Experiences, M. Goodwin and G. Pollen
Nutrition games and Activities for Youth, C. Fenster

Plan A School Lunch

Activity 51

Have the class plan a menu for the school lunch for a day. The class should develop a way to publicize to others that they planned the menu and which day it is to be served. Records of the numbers of pupils eating the lunch and of the plate waste should be kept. Compare with an average day.

This could also be done with several small groups of students with each group analyzing a menu lacking in a different food group. For example, the following sample is lacking in the bread and cereal group:

3 glasses milk
chopped beef patty
cottage cheese
glass of orange juice
an apple
carrot sticks
peas
tossed salad

This should be a cooperative effort between the class and the director of food services. The director of food services could discuss the requirements for a type A lunch and interpret any restrictions placed on the foods to be served so that the menu planned by the class could be served in the cafeteria. Using the technique of voting on disagreements, a group decision process can be used. This also reinforces the learnings about accepting foods even though they are not favorites.

KEY NUTRIENTS

Nutrient	What It Does	Major Food Sources
1. Protein	Necessary for growth and for building and maintaining skin, muscles, brain, hair, etc. Used to make antibodies, enzymes, and hormones. Supplies energy	Meat, Poultry, Fish, Dried Peas, and Beans, Eggs, Cheese, Milk, Nuts
2. Carbohydrate	Supplies energy. Main source of energy for the brain. Unrefined carbohydrates give us fiber which helps the digestive tract.	Cereal, Flour, Rice, Spaghetti, Macaroni, Dried Beans, Fruits, Vegetables, Sugar
3. Fat	Supplies concentrated energy. Gives and carries fat-soluble vitamins (A, E, D, K) and fatty acids. Keeps our bodies warm and protects us from injury.	Butter, Margarine, Oils, Nuts, Shortening, Salad Dressing
4. Vitamin A	Helps keep skin and membranes (e.g., in the nose and intestines) healthy. Helps prevent sickness. Helps eyes see in dim light.	Liver, Carrots, Sweet Potatoes, Spinach, Winter Squash, Beet Greens, Turnip Greens, Apricots
5. Vitamin C	Helps hold our body cells together, heal cuts, and prevent sickness. Helps the body use iron, another key nutrient.	Oranges, Broccoli, Grapefruit, Papaya, Mango, Strawberries, Green Peppers, Cauliflower, Tomatoes, Cabbage, Spinach
6. Thiamin (B1)	Helps the body use carbohydrates. Important for healthy nerves and for good appetite.	Pork, Nuts, Fortified Cereals, Macaroni and Spaghetti, Dried Beans, Ham
7. Riboflavin (B2)	Helps the body use energy. Important for healthy skin and eyes.	Liver, Milk, Yogurt, Cottage Cheese, Macaroni

 A Case of Waste, Reprinted with Permission, Cornell University, 1980.

KEY NUTRIENTS (continued)

Nutrient	What It Does	Major Food Sources
8. Niacin	Helps the body use carbohydrate, fat, and protein. Necessary to make body fat and help cells breathe. Important for healthy nerves, skin and digestive tract. Helps digestion and appetite.	Liver, Meat, Poultry, Fish, Peanuts, Fortified Cereals, Bread, Flour
9. Calcium	Important for healthy bones and teeth. Helps in blood clotting. Helps nerves and muscles work.	Milk, Yogurt, Cheese, Sardines and Salmon with Bones, Turnip Greens, Collard Greens
10. Iron	Forms an important part of hemoglobin, the compound in blood that carries oxygen and carbon dioxide between the lungs and body cells. Helps prevent sickness.	Liver, Meat, Poultry, Fish, Dried Peas and Beans, Raisins, Prunes

WELCOME TO THE UNCONVENTIONAL SNACK BAR
Teaching Plan

Are you a potato chips and cola snacker?
Or a carrots/bean sprouts/celery nibbler?
Is snacking bad for you?
Or can snacks contribute to your health and well-being?

Activity Synopsis

Students explore the question, "What's so bad about snacking?" by listing and categorizing their 10 favorite snacks. They then evaluate their snacks to identify the nutrient and caloric contents. Through discussion, students discover the importance of eating foods with adequate starch and fiber and avoiding too much sugar, fat, and salt.

Finally, students create and prepare some nutrient-plus, unconventional snacks as alternatives to nutrient-limited snacks.

Activity Outcomes

After completing this activity, the student will be able to:

- . Analyze foods (snacks) or nutrient and energy contributions
- . Analyze factors affecting food choices

Activity Terminology

- . Calories
- . Nutrient-limited
- . Nutrient-plus
- . Snacks

Estimated Teaching Time

Two class periods (approximately 40-55 minutes each)

Teaching Materials: First Session

- Each Student:
- . Favorite Snacks worksheet

____ National Dairy Council

Teaching Plan: First Session

1. Initiate the activity by explaining to the class that they are going to explore the "wonderful world of the munchies."

Distribute the Favorite Snacks worksheet to the class.

Give the students about two minutes to list their 10 favorite snacks on the worksheet.

Marking Their Snacks

2. When the students have listed their favorite snacks, have the students mark their worksheets, while you read the following directions. (A snack can have more than one mark.)

- . Put a star by the snack that you think is the "best" for your body.
- . Put a "G" by the snack(s) you'd be willing to give up for one year.
- . Put a "V" by the snack(s) you buy from a vending machine.
- . Put a "F" by the snack(s) you eat with friends.
- . Put an "S" by the snack(s) you eat after school.
- . Put a circle around the snack which you think has the most calories.
- . Put an "X" by the snack you think is the "worst" for your body.

3. Ask the class:

- . Is snacking good or bad for you?

4. Write the words "High Calories," "Best," and "Worst" on the chalkboard.

5. Ask the Class:

- . What snacks did you circle (High Calories)?
(Record their responses to this and the next questions under the appropriate heading.)
- . What snacks did you star (Best)?
- . What snacks did you "X" (Worst)?

6. Focus on the snacks that the students starred and ask them:

- . Why do you think this snack is best for your body?
- . Do you think these snacks contribute to your health?

7. Explain to the class that:

- . It is important to choose snacks for the kinds and amounts of nutrients they supply.

- . Foods that provide larger amounts of nutrients compared to the calories they provide are considered nutrient-plus foods. (Write "nutrient-plus = high nutrient/low calories" on the chalkboard.)
 - . Foods that contain small amounts of nutrients and larger amounts of calories are nutrient-limited foods. (Write "nutrient-limited = high calories/low nutrients" on the chalkboard.)
8. Go back to the students' Favorite Snacks worksheets and ask the class:
- . Do you have more nutrient-plus or nutrient-limited snacks?
 - . What do your snacks contribute to your diet?
 - . Calories?
 - . Nutrients?
 - . Or both?
9. Point out that:
- . Many people think of snacks as only high-calorie, low-nutrient foods, such as soft drinks, potato chips, and candy.
 - . Since snacking has become a part of many Americans' eating habits, snacks should provide more than just calories.
 - . Calories from snacks add to the total daily energy supply.
 - . But excess calories are stored as body fat and can lead to overweight and obesity.
 - . Most people need to select snacks with both nutrients and calories in mind to avoid excess calories.
 - . Growing children and teenagers usually need to eat some foods between meals to meet increased nutrient and calorie needs.
10. Have the class identify some nutrient-plus snacks that might be popular with teenagers. Explain that these can include snacks that are high in nutrients and in calories (e.g., pizza, ice cream sundaes) because some adolescents have high calorie needs for growth and activity.

Creating Snack Ideas

11. Divide students into cooking groups.
12. Write the specific foods selected for the second session cooking lab on the chalkboard. Explain to the class that in the next class session each group will create and prepare any snack they like. Use the ingredients listed below or limit the choices to those within your students' abilities:
- | | |
|----------------------------|-----------------------|
| . Fresh fruit | . Tomato sauce |
| . Raw vegetables | . Eggs |
| . Cheeses | . Milk |
| . Bread or english muffins | . Butter or margarine |
| . Yogurt | . Spices |
| . Ice cream | |

13. Tell the students that the snack can be a high-nutrient/high-calorie snack or a high-nutrient/low-calorie snack. Give the students about five minutes to decide and write down what snacks they will prepare in the next class session. Circulate around the room to clarify the assignment or assist students in creating a snack.

Some suggestions for snacks from the ingredients include:

- . Hasty pizza (an english muffin topped with tomato sauce and cheese)
- . Dip with raw vegetables
- . Fruited yogurt
- . Ice cream sundae (topped with fresh fruit)
- . Fruit milkshake
- . Western omelet (eggs, green pepper, mushrooms)
- . Scrambled egg sandwich
- . Open-faced cheese sandwich
- . Fondue for bread and vegetables
- . Fresh fruit and cheese slices
- . Hard-cooked eggs
- . Egg salad sandwich

14. Collect the worksheets and the students' snack ideas. Remind the class that they will be preparing the snacks in the next class session.



Teaching Materials: Second Session

Teacher:

. Specific foods selected in first session. Choose some of the following:

- . Bread or English muffins
- . Butter or margarine
- . Cheeses (American, cheddar, mozzarella)
- . Eggs
- . Fresh fruit (apples, bananas, strawberries)
- . Ice cream
- . Milk
- . Raw vegetables (cauliflower, cucumbers, green peppers, mushrooms, radishes)
- . Spices
- . Tomato sauce
- . Yogurt (plain)

Each Cooking Group:

. Cooking and eating utensils

Advance Preparation: Second Session

. Purchase the food items necessary for the preparation of the snacks(s) or obtain them from the school food service.

Teaching Plan: Second Session

1. Divide the students into cooking groups. Have the students collect the ingredients and utensils for preparing their snacks.
2. Time the groups while they prepare their snacks. (Record the finishing times on the chalkboard.) Circulate around the room to answer questions or clarify assignments.
3. Have each group serve their snack to the class.

Analyzing the Snacks

4. Ask each group:

- . How does your snack rate--high-nutrient/high calorie or high-nutrient/low calorie?
- . Do you like the snacks prepared?
- . Would you serve these snacks to your friends?

5. To summarize, explain that:

- . There are many types of snacks.
- . Some snacks are low in calories and high in nutrients.
- . As a rule, a snack is relatively low in calories if it is thin and watery (like tomato juice), crisp and watery (like celery, radishes, cucumbers, melons, and many other fruits and vegetables), or bulky (like salad greens).
- . A nutrient-plus snack provides larger amounts of nutrients compared to the calories they contain.
- . A snack is likely to be relatively high in calories if it is greasy-crisp or oily (like potato chips), smooth and thick (cream cheese and peanut butter), sweet and gooey (like candy, soft drinks, baked goods) or alcoholic.
- . Nutrient-limited snacks contain small amounts of nutrients and large amounts of calories.
- . Some snacks are relatively high in calories but are also high in nutrients. These snacks are nutrient-plus because they supply both calories and nutrients needed by active and growing individuals.
- . The major sources of calories in the average U.S. diet are carbohydrates and fats.
- . Carbohydrate foods contain half the number of calories per ounce as fats.
- . Complex carbohydrate foods, such as fruits, vegetables, whole grain breads and cereals, contain many essential nutrients in addition to calories.
- . Simple carbohydrates, such as sugars, candy, soft drinks, provide calories but little else in the way of nutrients.
- . In addition, a major health hazard from eating too much sugar too frequently is tooth decay (dental caries).
- . Although some snack foods, such as potato chips, pretzels, nuts, and popcorn, are not high in sugar, they are high in salt and fat.
- . The American population eats more salt and fat than is needed, therefore, snack foods high in salt and fat should be eaten sparingly.

6. End the session by asking the class:

- . What are some high-calorie nutrient-plus snacks?
Pizza, milkshake, ice cream, hamburgers.
- . When would you select a low-calorie snack instead of a high-calorie snack? Answers may include: while trying to lose weight, if on a special diet, for health reasons.
- . Why do we eat snacks like soft drinks, potato chips and candy? Answers may include: friends like them, availability, highly advertised, taste good.
- . What snacks are nutrient-plus?
- . Nutrient-limited?
- . Is snacking a healthy habit? Why?
- . What are your snacks giving you?

Evaluation

Circle the correct answer

1. A nutrient-plus food:

- a. Supplies more calories than nutrients
- ☒ b. Supplies more nutrients than calories
- c. Has no calories
- d. Should be limited if you are watching your weight

2. The following are all examples of nutrient-plus snacks, EXCEPT:

- a. Peanuts
- b. Pizza
- ☒ c. Chocolate cake
- d. Banana

3. All of the following are nutrient-limited snacks, EXCEPT:

- a. Coffee
- b. Potato chips
- c. Soft drink
- ☒ d. Orange juice

Going Further

- . Conduct a poster contest. Have students draw posters of nutritious snacks. Display these in a conspicuous place in the school, such as the cafeteria or a display case.
- . Have students write letters to the company which services the local vending machines requesting nutrient-plus snacks (such as fruit juices, nuts, raisins). Have students make their own Comparison Cards for the current vending machine foods and those they are suggesting as replacements.

Resources

- . U.S. Department of Agriculture, Home and Garden Bulletin Number 228, Pueblo, CO: Consumer Information Center.
This 64-page booklet was developed to give the consumer up-to-date, reliable information about food and nutrition issues. The chapter entitled "Is It True What They Say About Snacking?" gives good ideas on how to make snacks count in a balanced diet. Recipes are given for many of the suggestions for snacks.
- . Your Snacks: Chance or Choice? Rosemont, IL: National Dairy Council, 1969.
This award-winning, full-color poster (and mini-poster) shows a variety of nutritionally sound snack choices. A teacher/leader guide is included.
- . Why Not Snack? Rosemont, IL: National Dairy Council, 1975.
This 16mm sound, color film is a four-minute trigger to motivate students to discuss the pros and cons of snacking. A teacher/leader guide is included with discussion questions, projects and activities. The film portrays 4th-6th grade students.

FAVORITE SNACKS

Directions:

List your 10 favorite snacks. Be specific.



Favorite Snacks	Marks
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

FOODS WE EAT AT SCHOOL

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
4. Students will classify those foods that are served at school according to the meal at which they are served at.	1. Students will use the Nutrient Mobile worksheet as a motivator for learning which foods are served at which meals. (K-6) 2. Students will compare foods they eat at home and foods they eat at school in relation to the time of day the food is eaten and for which meal it is eaten.	1. A Case of Waste Sheet 11-1

NUTRIENT MOBILE

Humans require more than 50 essential nutrients to supply energy; to regulate body processes; or for growth, maintenance, and repair of body tissues. Different foods provide varying amounts of the essential nutrients.

Ten nutrients are considered "key": if the consumption of other nutrients will probable also be adequate. The key nutrients are protein, carbohydrate, fat, vitamin A, vitamin C, thiamin, riboflavin, niacin, calcium, and iron.

The nutrient mobile introduces students to key nutrients, their functions, and their food sources. Some of these nutrients are wasted whenever edible food is discarded.

Materials

Magazines with food pictures, Dairy Council food cards, and/or art materials

Scissors, construction paper, glue

Paper punch, string, ten coat hangers

Procedure

- . Divide the class into ten groups and assign each group one key nutrient.
- . Each group can cut from magazines or draw pictures of foods that are good sources of their key nutrient.
- . Back the pictures with construction paper, punch holes in them, and string each key nutrient group from a separate coat hanger. Each mobile should be balanced.
- . Hang the mobiles in the classroom and let each group explain its mobile to the class.
- . Have students list any foods they threw away during lunch yesterday. Use the mobiles to determine which nutrients were wasted.

A Case of Waste

Additional Activities

- . Have a key nutrient party. Each group could prepare a snack that is a good source of its key nutrient. Be sure to have enough so that everyone can taste each snack. (See if any of the foods can be obtained from the food-service manager, in order to defray the costs. Be sure to give him or her advance warning of your project.)
- . Look back at the school waste study. Determine which nutrients were lost from the foods most frequently thrown away.
- . Make collages of "favorite foods" with magazine pictures or drawings of foods. Label food pictures with the key nutrients each provides.
- . Students can make games to match foods with key nutrients provided by the foods. For example:

Carrots
Orange Juice
Liver
Milk

Calcium
Iron
Vitamin A
Vitamin C

- . Using grocery store advertisements collected from local papers, students can choose foods that provide specific nutrients within a certain price range. For instance, they might be given a budget of \$3.00 to spend for foods high in calcium and vitamin A.

FOODS WE EAT AT SCHOOL

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
5. Students will investigate the method by which food is purchased by the school cafeteria and in what quantities it is needed.	1. Distribute Learner Activities Nos. 22 and 23 and discuss with the class. How does this "chain of sale" affect what they eat in school? (4-6)	1. Health Education Physical Dimensions of Health, K-3 p. 20
	2. Students will invite the school dietician to visit their classroom to speak about the following topics: (a) How is food purchased for the school lunches? (b) In what quantities is food purchased? (4-6)	
	3. Students will follow-up activity #2 by planning a lunch menu for the school and ordering the necessary ingredients for that meal from the appropriate suppliers. (4-6)	

How Food Is Purchased for the School Cafeteria

Activity 22

Make a list on the chalkboard of all of the people who are involved in handling foods. They may include:

- . The farmer
- . People who work in the supermarket
- . The butcher
- . The baker
- . The truck driver

Activity 23

As a culminating experience have the children act out roles of shopper, storekeeper, and so on. Use empty food containers for stock and some real foods that may be eaten by the pupils as a snack.

It is desirable for the children to understand that cereal and bread come from grain which grows on the farm, that the grain is ground to make the flour that is used for making bread. Die-cut food models are available from the regional office of the Dairy Council. (See Appendix A. p. 107 of the Teachers' Manual).

A miniature, inclass store can be built using empty cartons, food containers, canned foods, etc. This activity can be used in conjunction with mathematic experiences as well.

Strengthen the learners' vocabulary. Some words used during these activities.

apple	farm	peach
baker	farmer	pear
bread	favorite	raw
butcher	food	seed
butter	food-like	sight
cheese	fruit	smell
color	juicy	sweet
cooked	milk	taste
cream	nonfood	texture
cow	odor	vegetable
egg	party	yogurt

____ Health Education, Physical Dimensions of Health

FOODS WE EAT AT SCHOOL

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
6. Students will investigate how various categories of food which are served in the cafeteria are grown and processed.	1. Students will draw up a list of the various categories of food served in the school cafeteria. (K-6)	
	2. Use the "Sprouting Beans" worksheet to learn how beans are grown. (K-6)	2. Food Activities for Children, p. 3
	3. Use Learner Activities #17-23 as an introduction to a discussion on where various foods come from. Use the lists from activity #1 to guide you. (k-6)	3. Health Education Physical Dimensions of Health, K-3 pp. 19-20
	4. Students will complete a chart showing the various categories of food served in the cafeteria and where it comes from. (3-6)	

Planting

Plant different seeds to watch them grow (e.g., avocado seeds, sprouts). Show how vegetables grow in the ground. Try drying leaves.

Find out about planting a vegetable garden at your school during spring and fall seasons. (Contact NYC Gardening Program, Cornell University Cooperative Extension).

Sprouting Beans

Sprouting beans is an easy and inexpensive way of showing children how plant life grows. Have the children wash beans carefully and soak them in water overnight (1/2 tablespoon of beans will make 1/2 cup of sprouts). The children can then drain the beans and place them in plastic bags which can be closed securely. The beans should be kept out of direct sunlight but at room temperature. Rinse the beans with lukewarm water two or three times a day, making sure you drain the beans well after each rinsing. The beans will be sufficiently sprouted from two to five days, best when one or two inches long. During the "sprouting process," have children check the growth of the sprouts by measuring the length periodically and drawing pictures illustrating size and shape change. Use the sprouting session to teach children how seeds store nutrients and the various processes plants go through in their growth cycle. Have a tasting party where sprouts are incorporated into various dishes, e.g, salads. (Note: Sprouts can be stored in the refrigerator for three to five days).

Draw a picture of how the bean grows. . .

Stage 1

Stage 2

Stage 3

Stage 4

____ Food Activities for Children

SUB-TOPIC: Where does food come from?

ENABLING OBJECTIVE: The learner is able to list places where people get their food.

LEARNER ACTIVITIES

17. Where do different foods come from?

- . Where does milk come from?
- . Where does meat come from?
- . Where do fruits and vegetables come from?
- . Where do cereals and bread come from?
- . Add, also, some prepared foods, such as pasta.

18. Arrange a class field trip to a dairy farm--to a farm where animals are raised for meat and eggs--to a vegetable farm--to a fruit farm.

19. Using pictures of animals, discuss what meats come from which animals; especially those not obvious by their names. For example: hamburger, steak, sausage, ham, bacon, liver.

20. Plan and conduct a visit to a bakery so that the class can observe how bread is made.

21. Using pictures or food models, discuss where different foods come from. Concentrate especially on some of the less obvious ones; e.g., peanut butter, cheese, raisins, jams and jellies, cereal and bread.

TEACHER INFORMATION

Obtain the booklet, "Where We Get Out Food" from the office of the Dairy Council. Other materials available from the Dairy Council appropriate for this area are: "Uncle Jim's Milk Please, a film and booklet, the booklet, "More Milk Please," and the filmstrip "Life on a Dairy Farm."

The pupils should understand that the farmer produces and sells the food from his farm. The food is then prepared to go to the supermarket where we buy it. It may also be interesting to discuss some of the synthetic foods being made; e.g., imitation bacon from soybeans.

Prior to the field trip, discuss and list the kinds of things the pupils are likely to see. Following the trip, discuss those things that impressed the pupils; some pupils will observe some things that others may have missed.

It is desirable for the children to understand that cereal and bread come from grain which grows on the farm, that the grain is ground to make the flour that is used for making bread. Die-cut food models are available from the regional office of the Dairy Council.

22. Make a list on the chalkboard of all of the people who are involved in handling foods. They may include:

- . The farmer
- . People who work in the supermarket
- . The butcher
- . The baker
- . The truck driver

23. As a culminating experience have the children act out roles of shopper, storekeeper, and so on. Use empty food containers for stock and some real foods that may be eaten by the pupils as a snack.

A miniature, inclass store can be built using empty cartons, food containers, canned foods, etc. This activity can be used in conjunction with mathematic experiences as well.

Strengthen the learners' vocabulary. Some words used during these activities:

apple	fruit
baker	juicy
bread	milk
butcher	nonfood
butter	odor
cheese	party
color	peach
cooked	pear
cream	raw
cow	seed
egg	sight
farm	smell
farmer	sweet
favorite	taste
food	texture
food-like	vegetable
	yogurt

FOODS WE EAT AT SCHOOL

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
7. Students will determine through an investigation of one week's menus if the school cafeteria serves multiethnic foods and will determine the origin of those foods.	1. Students will make a list of all the foods they ate in the cafeteria during a one week period. (K-6)	
	2. Use Learner Activities #58-59 as a lead-in to a discussion on multi-ethnic foods and eating customs. (3-6)	2. Health Education Physical Dimensions of Health, K-3 p. 42
	3. Use "Restaurant Roots" as a reading to lead to discussion of how eating habits change when a person is infused into a new culture. (4-6)	3. Bodyworks, pp. 114-117
	4. Use Learner Activity #40 in a discussion of how school foods influence the eating habits of students.	4. Health Education Physical Dimensions of Health, K-3 p. 33
	5. Students will make a chart showing the foods served in the cafeteria (from exercise #1), what ethnic group they come from, and what ethnic groups are most associated with eating that food in America.	

SUB-TOPIC: Why do different families have different eating patterns?

ENABLING OBJECTIVE: The learner is able to explain why different families may eat different kinds of food.

LEARNER ACTIVITIES

58. Make a list of different kinds of menus found in different cultural and ethnic groups. Encourage the pupils to talk about foods their families especially enjoy. If some of the pupils cite foods that others have not eaten, arrange to bring some of that food to class for the other children to taste.

59. Discuss the methods of eating in other countries.

- . What are some eating utensils that are used in various countries?
- . How are these foods prepared? (Seasoning, cooking, serving, etc.).
- . Why do people choose the foods they do?
- . Why do mothers choose the foods they do for the family?

TEACHER INFORMATION

You may want to review the Dairy Council's poster, What Did You Have for Breakfast This Morning?

The class will conclude that families have their own favorite foods.

Invite a foreign student from the high school or a college to come and talk with the class about the foods eaten in his or her native country. Discuss how these foods differ from or are like those in the United States.

You may want to make a list of certain dishes identified with certain nationalities. This can be done in conjunction with social studies.

Possible answers are because she likes them, the family likes them, they are nutritious, they are economical, they are easy to prepare, they are available.

Vocabulary:

cook	native
culture	nationality
foreign	serve

Restaurant Roots

One of the reasons you have so many food choices is because our country is made up of people from all over the world. People from a particular country who share language and customs are said to have the same ethnic background. Choice of food is one of the signs of ethnic differences.

For 300 years, waves of immigrants to America have brought us special dishes from their old countries. Italian immigrants brought us mozzarella cheese and pasta specialties like ravioli and lasagna. Mexicans have introduced us to tacos and hot chili dishes. A hundred years ago, German settlers arrived with sausages and sauerkraut, and a curious chopped beefsteak dish named after the city of Hamburg, Germany. This "hamburger" was introduced at the St. Louis World's Fair in 1909 and became a hit overnight! We owe many popular American foods to groups of settlers who adapted their old recipes to the local crops, climate, and customs of our country. They have helped make food in this country the most varied in the world.

When settlers first arrived, they usually kept their old ways of eating within their family and community. Until the middle of the 1800's, most American immigrants were farmers and settled in small towns all over the country. After about 1870, many newcomers flocked to neighborhoods in big cities where fellow countrymen were already living.

The immigrants in cities often set up eating places where they could eat familiar foods and speak their own language. These restaurants became places where friends could meet to talk about their new lives in a strange country. Gradually more and bigger restaurants opened up as ethnic foods became more popular with the general public. As immigrants' children and grandchildren moved to new places, ethnic restaurants often followed them.

People from different backgrounds now live in all parts of our country. You couldn't find too many pizza places in small American towns 25 years ago. Today, you would have to look pretty hard to find a town without one. Many regions have special dishes handed down from the settlers who arrived there. Are there special ethnic foods and festivals in your part of the country?

Ethnic foods give us a glimpse of the enormous variety of foods in the world. When you try Hungarian goulash or Chinese sweet and sour chicken, you sample a bit of life from a different country. If you eat some of the foods that your ancestors used to eat, you take a time machine trip back to your family's past.

Each country has developed its own special ways of preparing everyday foods or special holiday dishes. Homemade soups, breads, desserts, and beverages all use locally available ingredients, but the results are amazingly different. Let's say you took a basic grain--like wheat--and ground it into flour, pounded it, kneaded it, fried or baked it. You might end up with a golden loaf of bread, a puffy fritter, a twisted pretzel, or a flat, thin pancake, depending on which ethnic cooking style you used.

Bodyworks

Each country has used of the important grain foods of the world to develop delicious dishes. In cold climates like Scotland, people preferred to cook with the rye or oats that grew there. In parts of China and India where rice is commonly grown, that became the most common food in the diet. In the Americas, corn was the native crop used in all early American cooking.

Let Your Fingers Do the Eating

Check the restaurants section of the yellow pages in your area. How many kinds of ethnic restaurants do you find? Which national foods seem to be the most popular? Do you know if many people of that background live in your town or city?

SUB-TOPIC: Personal Experiences

ENABLING OBJECTIVE: The learner is able to list several experiences that influence their food choices.

LEARNER ACTIVITIES

40. Discuss the influence of school lunch on the pupil's food habits.
- . Do you now eat any foods that you did not before trying them in the school lunch?
 - . Do you eat foods at school that you don't eat at home?

TEACHER INFORMATION

The director of school food services may want to be involved in this kind of discussion. The director may be able to add some points for discussion based upon what the pupils eat at lunch, plate waste, and the like.

List these in two columns on the chalkboard labeled: "School Lunch Influences" and "School Lunch Choices."

Health Education, Physical Dimensions of Health

FOODS WE EAT AT SCHOOL

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
8. Students will, after consultation with the school dietician, recommend a cafeteria menu for one week's meals, using the NYC Board of Education guidelines for nutrition as a guide.	1. Students will consult with the school dietician to determine the availability of specific foods. (3-6)	
	2. Students will use the "How to Plan Menus" worksheet as a guide to planning five lunch menus. (3-6)	2. A Menu Planning Guide for Type A Lunch. pp. 14 and 17
	3. Students will use the "Likes and Dislikes" worksheet as an introduction to a discussion on what food to realistically serve in the school cafeteria.	3. A Case of Waste, Sheet #13
	4. Students will survey various classes in the school to ascertain what foods they like to eat in the school cafeteria. (K-6)	
	5. Students will use all the input from the various activities to draw up a final menu for a one week period.	

How to Plan Menus

The thoughtful planning of menus for a month at one time helps assure a good variety of foods, increased use of USDA-donated foods, economy in buying, and effective use of facilities and employees' time and skills. To plan menus for a month, use the Type A lunch pattern and the chart for the amount of food for boys and girls of specified ages as guides and keep the following points in mind:

PLAN THE MEAT AND MEAT ALTERNATE MAIN DISHES FOR THE ENTIRE PERIOD

- . Plan to use a variety of main dish items during the month.
- . Include meat and meat alternate that are sources of iron as frequently as possible.
- . If a meat or meat alternate is repeated during the month, vary the vegetables and fruits used.
- . Follow a plan for providing a good variety of meat and meat alternates in the main dishes. For example, in each four week period, plan to meet the meat and meat alternate requirement by serving:

Meat--alone or supplemented with cheese,
eggs or peanut butter 8 to 10 times

Poultry, Fish or Cheese--alone or supplemented
with eggs or peanut butter. 4 to 6 times

Dry Beans or Dry Peas--combined with meat or cheese . . . 4 times

Any other meat and meat alternate or any
combination of meat and meat alternate foods. 2 times

CHOOSE THE VEGETABLES AND FRUITS

- . Plan vegetables and fruits that "go well" with each main dish and each other. Use a different combination of two or more servings of vegetables and fruits each day. Include various forms of vegetables and fruits--raw or cooked; fresh, canned, frozen or dried.
- . Include vegetables and fruits that are sources of:

Vitamin A at least twice a week

Vitamin C several times a week

Iron. as frequently as possible

SELECT A VARIETY OF BREADS

- . Use an enriched or whole-grain bread which will "go well" with the main dish and other items in each lunch.
- . Plan to use a different kind of bread each day.
- . Include school-made loaf breads or hot breads, such as rolls, sandwich buns, muffins, biscuits, brown bread, cornbread, as often as possible.

INCLUDE BUTTER OR FORTIFIED MARGARINE

- . Plan to use butter or margarine for each lunch each day as a spread for bread or in preparation of the lunch.

INCLUDE MILK

- . Use fluid milk as the beverage with each lunch.

ADD DESSERTS AND OTHER FOODS AS NEEDED

- . Include desserts and Other Foods in the lunches to help meet the boys' and girls' needs for calories and other nutrients.
- . Plan to use the more satisfying types of these foods--the enriched or whole grain cereals and other products such as macaroni, rice, bulgur and the richer desserts, such as cakes and pies with the lighter lunches. Serve fruits and lighter desserts with the more hearty lunches.

How to Plan a Meal

MENU	Size of Serving	Meat and Meat Alternate	Vegetables and Fruit	Bread	Milk	Other Foods
DAY 1						
Country Fried Steak/ Brown Gravy	2 oz. 1/4 c	Ground Beef	Potatoes, French Fries, Regular Crinkle cut	Cornmeal Yeast Roll	1/2 pt	
Oven French Fried Potatoes	1/2 c					
Buttered Broccoli	1/4 c		Broccoli, Frozen Chopped			
Sliced Peaches	1/4 c		Peaches, Canned Sliced			
Buttered Cornmeal Yeast Roll	1 roll					
Milk	1/2 pt					
Cost per lunch _____						
DAY 2						
Oven-Fried Chicken	2 oz	Chicken, frying	Canned Green Peas	Rolls	1/2 pt	Rice
Parsley Rice	1/3 c		Onions			
Savory Peas	1/4 c					
Chilled Fruit Cup	1/2 c		Fruit cup			
1/4 c pineapple,			Canned Pineapple Chunks			
1/8 c grapefruit			Grapefruit Sections			
1/8 c banana			Bananas			
Roll	1 roll					
Butter (on peas & roll)	1 tsp					
Milk	1/2 pt					
Chocolate Chip Cookies	1					
Cost per lunch _____						

MENU	Size of Serving	Meat and Meat Alternates	Vegetables and Fruit	Bread	Milk	Other Foods
DAY 3						
Fish Sticks/Catsup	2.3 oz	4 oz Breaded Fish	Corn, Whole Kernel	French Bread	1/2pt	Catsup
Confetti Corn	1/4 c		Wet Pack			
Glazed Carrots	1/4 c		Pimiento, Green Pepper			
Tossed Salad/Tomatoes & French Dressing	1/4 c		(Garnish)			
French Bread	1 serv.		Carrots			Gingerbread
Butter (on corn & carrots)	1 tsp		Lettuce			
Milk	1/2 pt		Spinach			
Gingerbread	1 serv.		Onions			
Cost per lunch _____			Tomatoes			
			Radishes			
DAY 4						
Lasagna	2 Oz	Ground Beef	Green Beans	Wheat Bread	1/2pt	
Seasoned Green Beans	1/4 c	Cheese	Cabbage			
Cabbage Green Pepper	1/4 c		Green Peppers			
Apricot Crisp	1/4 c		Canned Apricot Halves			
Wheat Bread	1 slice		Lemon Juice			
Butter (on beans & crisp)	1 tsp					
Milk	1/2 pt					
Cost per lunch _____						
DAY 5						
Toasted Cheese Sandwich	2 oz	Cheese	Potatoes	Bread	1/2pt	Cinnamon Crispies
Potato Salad	1/2 c		Celery			
on lettuce	1/8 c		Onions			
Tropical Apples	1/4 c		Lettuce			
Butter (on sandwich, in apples)	1 tsp		Apples, Canned			
Milk	1/2 pt		Oranges			
Cinnamon Crispies	1		Lemons			
Cost per lunch _____			Pineapple Juice			

Likes and Dislikes

Sister Sharon of St. Johns School in New Hartford, N.Y., observes that "children seem to have improved appetites and are more anxious for lunch when the play period precedes the lunch period."

Many factors affect eating habits, including family practices, culture, friends' influences, advertising, and taste preferences. These same factors help determine the types and amounts of food thrown away. In this activity students can express some food preferences and the reasons behind them. They can also see how preferences are related to food waste.

Materials

Paper and pencil
Chalkboard

Procedure

- . Have the students make four columns on sheets of paper, with headings as shown below.
- . Ask the class to compose a list of 10 to 15 foods that are commonly served in the cafeteria. They should include some favorites and some that are less well liked. Each student should write all of the foods on his or her paper.
- . Without writing their names on their papers, students should indicate whether they "like," don't like, but eat," or "never eat" each food listed.
- . Have groups of students tabulate and record the results on the chalkboard.
- . After viewing the results, discuss some of the following questions:
 - Which foods are best liked? Least liked? Are any foods universally liked or disliked?
 - Are disliked foods more often thrown away?
 - What other reasons besides actually disliking a food make a person throw it away? (desire to get to the playground faster, friends don't eat it, have never tasted it before, the food is spoiled, etc.)

Researchers at Utah State University found that scheduling playtime before rather than after lunch significantly decreased the amount of food that students threw away.

- . Let the school food-service director and staff know the results of the survey. Offer to work with them to design menus, taste-test recipes, etc.
- . Repeat this activity using foods eaten at home. Then compare the results of the two surveys?

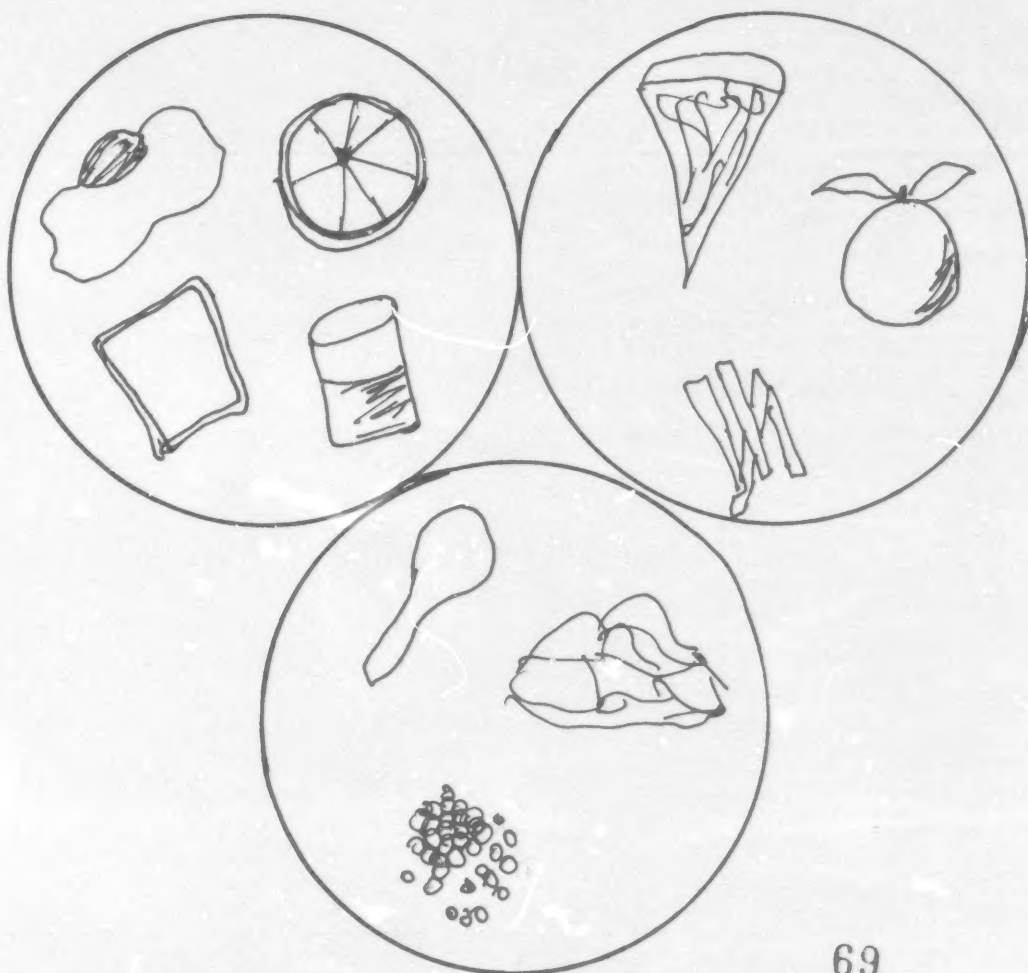
Food	Like	Don't Like But Eat	Never Eat

___ A Case of Waste

FOODS WE EAT AT SCHOOL

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
9. Students will interview the workers in the school who are employed in the food service unit in order to find out about their jobs.	1. Students will compile a list of those people to be interviewed. (3-6) 2. Students will draw up list of questions they want to use for the interviews. (3-6) 3. Students will write a letter to each person to be interviewed inviting them at a specific time and place. (3-6) 4. Students will do the interviews using video recorders or audio recorders as desired. (3-6) 5. Students will role play worker roles based on the information gathered in the interviews. They will also discuss feelings about such jobs. (3-6) 6. Students will compose and edit a student newsletter designed to tell parents about what they have learned in this unit.	

FOODS WE EAT AT HOME



FOODS WE EAT AT HOME

Since students in special education classes often eat two meals each day at school, the meal at home is usually the most important of the day in terms of socialization with other family members and in terms of learning experiences.

It is universally recognized that children learn best when they go from the known to the unknown material. The same holds true for the material in this Guide. Students move from the known environment of eating at home to the unknown environment of eating at school and restaurants. This theme builds that bridge from home to classroom. It is hoped that teachers will use the material in this theme to encourage parents to become partners with their children in the nutritional activities which occur at school each day.

The performance objectives for this unit are:

Students will be able to distinguish between food and non-food items and identify those foods they eat at home.

Students will identify by origin those foods eaten at home.

Students will categorize those foods eaten at home according to function and nutritional value and will be able to discuss the need for good nutrition.

Students will identify foods that are eaten for lunch, breakfast, dinner, snacks, etc. and for various celebrations and holidays, and be able to discuss the importance of eating a balanced diet.

Students will construct a master shopping list of those items most frequently purchased for family meal preparation.

Students will use their master shopping list to develop skills in comparison shopping and in consumer awareness.

Students will be able to discuss ethnic foods and their origins and will invite parents of various ethnic backgrounds to visit the class and demonstrate ethnic cooking.

Students will prepare a class/center cookbook containing the recipes for foods frequently eaten at home.

FOODS WE EAT AT HOME

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
1. Students will be able to distinguish between food and non-food items and identify those foods they eat at home.	1. "What Is Food" can be used as an introduction to this objective. The students will learn to distinguish food from nonfood items. (K-6)	1. Nutrition Education K-3 pp. 13-15
	2. Students will identify their favorite foods. Use this as a lead into the information contained in "Special Foods." (K-6)	2. Nutrition Education (K-3) p. 41
	3. Have students complete the information on "My Diet Card" for one week.	3. Food Peddlers
	4. When students bring their lunch to school, it is often prepared at home. The information in "Take the Drag Out of Bag Lunches" should be shared with parents. (K-6)	4. The Doofus Stories pp. 14-17
	5. Ask the students to name one food that they do not like. Use this discussion as a lead into the material contained in "Different Tastes." (K-6)	5. Nutrition Education (K-3) p. 26
	6. Have each student list two of their favorite foods. Ask them to compare their favorite foods with those of their classmates. This is a lead into "Why We Like Certain Foods."	6. Nutrition Education (K-3) p. 30
	7. Use the worksheet "What I Eat At Home" to evaluate the student's mastery of the objective.	

TOPIC: The Development of Food

SUB-TOPIC: What is Food?

TERMINAL OBJECTIVE: To become familiar with and motivated to include a variety of foods in the diet.

ENABLING OBJECTIVE: The learner is able to distinguish between food and nonfood items.

LEARNER ACTIVITIES

1. Have the children sit on the floor in a circle. Pass around several objects for each child to see and to feel. Some of the objects should be common foods; e.g., apple, carrot, etc. Other objects should be nonfood items. They may, however, be food for other animals.
2. After each child has had a chance to see and feel each object, take them one at a time and talk about what it is, whether or not it is food, where it comes from and what the nonfood items are used for. For the foods, talk about how each tastes and when most people eat them. Have a tasting party for foods that are appropriate.
3. Compile a variety of pictures of foods and food-like products from magazines.
 - . What is a food?
 - . What makes certain things food and others not?
 - . How many different kinds of foods can the pupils name?
 - . Which ones are fruits? Vegetables? Meats?
4. Have children select five or six of the pictures and paste them on paper. Each child should then identify the foods they have on paper.
5. Select one or two of the pages of pictures for class discussion. Talk about why some of the non-foods are not foods and why some should not be put into the mouth.

TEACHER INFORMATION

These activities are intended to help the pupils to recognize that there are many different kinds of foods, that foods come in a variety of shapes, and that some can be eaten without cooking. The pupils should learn that foods come from many parts of the world. It may be possible to bring into the discussions those foods associated with their social studies activities.

The food-like or nonfood products can include such things as a toothbrush or mouthwash. Although they go into the mouth, they are not foods.

Pictures of many different foods should also be included. Include pictures of foods with which some of the pupils may not be familiar.

This activity can be made more realistic if some of the foods pictured could be brought to class the next day. In this way, the learners will also see and feel how they actually are. If it is appropriate, cut some of the foods into small pieces so that the learners can taste them.

Foods provide a specific purpose for the body. They are substances that can be digested, absorbed and assimilated by the body. They provide the body with energy, building materials for new cells and body functions.

Discuss also why some other non-foods can be safely put into the mouth.

- . Why are the nonfoods not foods?
- . Why are the foods, foods?
- . Why should some things never be put into the mouth?
- . Why are some nonfoods safe to be put into the mouth?
- . Can the pupils name all of the foods and where they come from?

Nonfoods can not perform any of these functions.

Some things should never be put into the mouth because they may be poisonous, cause injury or infection.

SUB-TOPIC: What are the varieties of food?

ENABLING OBJECTIVE: The learner is able to identify a variety of familiar and new foods.

LEARNER ACTIVITIES

6. Have the children look up certain foods in the child's dictionary-- one that contains pictures as well as the words. Have each child identify his/her favorite foods and see if they are included in the dictionary.
7. Develop a scrapbook of the learner's favorite foods. Include pictures, descriptions, sources and so on.
 - . Have the children draw a picture of three of their favorite foods. Color them. Name them. State where they come from.
 - . Have the children state why they like to eat each of the foods they have drawn.
8. Have a tasting party so that the children can sample different kinds of vegetables.
9. Have the children participate in preparing the foods for the party. Ask the children which foods they liked best. List these on the chalkboard and discuss why they are favorites. Include taste, color, texture, feel, and odor, in the discussion.

TEACHER INFORMATION

A Child's Dictionary, Scott Foresman & Co., 99 Bauer Drive, Oakland, New Jersey 07436.

Much language arts learning can take place through nutrition education. Letters and words can be learned better when they are associated with real life experiences. Since all people must eat and most people enjoy experiences with foods, nutrition learning can act as the motivator and vehicle for learning to read. (Consult with your librarian about books dealing with foods that are appropriate for your pupils.)

Be certain that some of the vegetables for the party are familiar to all of the children, but also include some unusual ones.

Have available in raw form some vegetables that are usually eaten cooked. For example, include pieces of cauliflower, turnip, etc.

SUB-TOPIC: What special events is food a part of?

ENABLING OBJECTIVE: The learner is able to list situations where food is used as an important part of the occasion.

LEARNER ACTIVITIES

55. Have a birthday party for all the children whose birthdays fall within a certain month. Use an entirely different approach. Instead of the usual cake and ice cream, serve new foods such as carrot cake, cottage cheese, ice cream, squash pie, etc. Have the children help to plan the party.

- . Can we have a birthday party without cake and ice cream?
- . How would the party be different?
- . What other foods can we associate with certain events? (Turkey, ham, fruit and nuts, etc.)

56. Discuss holidays in which food has a traditional place. Make a bulletin board display of foods for these holidays.

57. Discuss: Mealtime is a time for the family to be together.

- . Why can it be important for the family to eat together sometimes?
- . Besides the kind of foods being served, what else can make mealtime pleasant?

41. Discuss the effects on a family's food habits from moving from one part of the country to another. Perhaps some of the pupils have first-hand experiences that they can share with the class.

TEACHER INFORMATION

Food is Food is part of many happy situations (weddings, birthdays, holidays) that give us pleasure.

Read to the class the tea party sequence from Alice in Wonderland.

Vocabulary:

appearance
birthday
cake
family

holiday
ice cream
mealtime
pleasure

Popular foods in various regions of the United States reflect the nationalities of early settlers--Florida Spaniards, for example. Also, the kinds of agriculture carried on because of the soil, climate, etc., will influence popular foods in a region.

MY DIET CARD

Name _____

Date _____

What I ate or drank

When I finished

How long it
took me to eat

breakfast		
snack		
lunch		
snack		
dinner		
snack		

___ Food Peddlers

SOME FRESH IDEAS ON HOW TO TAKE THE "DRAG" OUT OF BAG LUNCHES

The food children eat affects their learning and behavior, as well as their growth and development. Hungry children have difficulty concentrating on school work and have a tendency to become restless and over-active. The noon meal is very important and should include the following:

- 1) One half-pint of low fat milk, skim milk, low fat yogurt or buttermilk.
- 2) Two ounces (edible protein as served) of lean meat, poultry, or fish; or 2 ounces of cheese; or one egg; or one-half cup of cooked dry beans or peas; or 4 tablespoons of peanut butter, or an equivalent quantity of any combinations of the above listed foods.
- 3) A three-fourths cup serving consisting of two or more vegetables or fruit, or both.
- 4) One slice of whole grain or enriched bread.

Planning Lunches - Good for Picnics Too!

1. Sandwiches prepared the night before or in the morning before leaving for school should be safe to eat, if properly handled. Proper handling means good sanitation, adequate cooking and refrigeration.
2. If the food was properly handled at home with the sandwiches being chilled or frozen, it should be safe to eat at school, even if not refrigerated at school.
3. Sandwiches could be wrapped in foil and frozen the night before. With care, foil may be reused as well as recycled.
4. When freezing sandwiches, omit lettuce or other greens unless chopped with filling. Wrap lettuce or greens separately. Add to sandwich at time of eating.
5. A small thermos with a wide mouth might be a good investment. It can be used to carry such things as chili, sliced fresh fruit, crispy lettuce, or coleslaw.....foods that might add variety to a packed lunch.
6. Try to use leftover meats as sandwich fillers, e.g., chicken salad made from leftover chicken or even a cold chicken leg might be a welcome change.
7. Save small plastic tubs about 6-8 ounce size (soft margarine containers). The containers are good for carrying salad, puddings and fruit.
8. Children usually find raw vegetables fun to eat. They have more vitamins than when you cook them.
9. Desserts should be kept simple. Try fruit, pumpkin seed, sunflower seed, peanuts, raisins, puddings or a plain cookie.

Reprinted from Creative Food Experiences for Children, which is available from the Center for Science in the Public Interest, PO Box 7226, Washington, D.C., 20044, Copyright CSPI.

10. Children usually like cheese and crackers for lunch. If possible you could send a small thermos of soup along with them.
11. If you are sending cut fresh fruit such as bananas, apple wedges or peach halves, dip the cut part of the fruit in any type of citrus juice such as lemon, orange or grapefruit juice. This prevents the fruit from turning brown. Dipping fruit in salted water or vinegar will also prevent the fruit from turning brown.
12. A piece of fruit will cost no more, and usually less, than packaged fruit, potato chips, corn chips and other junk foods which too often are included in packed lunches for children.

Sandwich Ideas

Egg: Chop hard-cooked egg and mix with salad dressing. For variety, add one or a combination of the following:

Onion	Bean Sprouts	Chopped Raw Spinach
Celery	Lettuce	Grated Cheese
Raisins	Grated Carrot	
Green Pepper	Chicken	

Cheese: Sliced or grated with salad dressing. For variety add:

Chopped Nuts	Chopped Onion	Crushed Pineapple
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Cottage Cheese, Tomato sauce & oregano or Brown mustard For variety mix with:

Cucumber	Chopped Fruit	Nuts
Applesauce	Tomatoes	Green Pepper
Sliced Banana	Caraway Seeds	

Peanut Butter: Plain or with one of the following:

Raisins	Molasses	Chopped Prunes
Shredded Carrot	Nuts	Sliced Apple
Sliced Banana	Sprouts	

Baked Beans: Plain or mashed with chopped onion and a small amount of chili sauce or raisins.

Fish: Tuna with salad dressing; add chopped celery, peanuts, apple slices or raisins

White fish with chopped celery, catsup, salad dressing.

Salmon with salad dressing; add chopped celery.

Sardines plain or with salad dressing.

Meat: Chicken sliced or chopped with salad dressing and shredded raw greens.

Beef sliced or chopped with salad dressing, mustard and shredded raw greens.

Turkey (canned) sliced with nuts, celery, pineapple or apple slices.

Breads

Whole grain breads such as whole wheat, rye, cracked wheat are best. If white bread is used, be sure it is enriched.

Fruits and/or Vegetables (something crisp or juicy)

<u>Raw Vegetables</u>		<u>Fruits*</u>	
Carrot Strips	Cauliflower Florets	Apples	Apricots
Celery Sticks	Cucumber Strips	Bananas	Berries
Lettuce Wedges	Kohlrabi Slices	Cherries	Grapefruit
Spinach Leaf	Small Tomato or Wedge	Grapes	Oranges
Turnip Sticks	Green Pepper Strips	Peaches	Pears
Endive Pieces	Raw Potato Pieces	Plums	Tangerines
Radishes	Cabbage Leaves	Melon Wedges	Seedless Grapes
		Strawberries	Pineapple
			Wedges, fresh

*Canned fruits may be taken in bag lunch if put in tightly covered plastic container. Drain the sugary syrup. Canned fruits can be purchased in their natural juices.

Nutritious Treats

Raisins	Granola	Sunflower
Nuts	Pumpkin Seed	Peanut Butter ball rolled in roasted sesame seeds

These items may be purchased in large units. A small amount wrapped in a twist of waxed paper could be placed in the lunch bag.

Milk

Low fat milk, skim milk, low fat yogurt or buttermilk. Try a milkshake with powdered milk, banana, or orange juice with a dash of cinnamon on top.

Foods to Avoid

Foods which should be avoided are those which contain excessive amounts of saturated fat, sugar or potentially harmful food additives such as in soft drinks, candy, jellied sugar doughnuts, potato chips, corn chips, sticky cakes, cookies and rich pastries. These foods have little or no nutritional value and are usually high in calories and cost.

PACKED LUNCHES

White Fish Sandwich with Catsup
and Parsley
Celery Wagon Low-fat Yogurt
Granola Low-fat Milk

Peanut Butter and Banana Sandwich
Carrot Sticks Hard Cooked Egg
Low-fat Milk

Bean Sandwich on Whole Wheat Bread
Coleslaw or Grated Carrots
Apple Low-fat Milk

Cottage Cheese and Raisin Sandwich
on Boston Brown Bread
Pepper Rings Orange
Low-fat Milk

Scrambled Egg Sandwich
Fresh Tomato or Spinach Leaves
Pumpkin or Sunflower Seeds
Low-fat Milk

Sliced Turkey, Lettuce and Biscuit
Sandwich
Baked Sweet Potato
Green Pepper Strips Low-fat Milk

Cheddar Cheese and Bean Sprout
Sandwich
Banana Low-fat Milk

Tuna Salad on Roll
Green Pepper and Carrot Sticks
Pear or Plum

Turkey Salad Sandwich
Green Salad Low-fat Milk Pudding
Orange Juice Low-fat Milk

Chopped Egg Sandwich
Orange Wedges Peanuts
Low-fat Milk

Salmon Salad Sandwich with Lettuce
Carrot Strips or Spinach Leaves
Banana Low-fat Milk

Swiss Cheese Sandwich with Lettuce
on Whole Wheat Bread
Tangerine Low-fat Milk

Tuna Fish and Lettuce Sandwich on
Whole Wheat Bread
Fresh Tomato or Coleslaw
Low-fat Milk

Baked Bean and Raw Vegetable Sandwich
(or Stewed Beans)
Melon or Pineapple Wedge
Low-fat Milk

Cottage Cheese and Pineapple on Nut
Bread
Cherry Tomatoes Oatmeal Cookie
Low-fat Milk

Riceburger
Tomatoes Hard Cooked Egg
Oatmeal Muffin Low-fat Milk

Chicken Wings or Drumstick
Roll or Muffin with Margarine
Fruit Salad Peanuts
Low-fat Milk

Chopped Chicken Liver Sandwich
on Rye Bread
Parsley and Cucumber Fingers
Apple Low-fat Milk

Surprises

On special occasions, include a favorite treat in the packed lunch. A message like "you are magnificent," a short poem, a funny drawing, or a portrait on an open face sandwich. For the face, use peanut butter or cream cheese, carrot curls or parsley for hair, green pepper, apple, nuts and raisins for the eyes and nose. Make a celery wagon with carrot slices on toothpicks for wheels. Put the message inside the wagon.

Different Tastes

22. Discuss: Even during a time of real famine, the French people generally would not eat corn (maize).

- . Why are people sometimes reluctant to try different foods or foods with which they are not familiar?
- . Can the pupils cite examples in their own lives where they would not change some of their eating practices, no matter what?
- . What differences are there today in making changes that were not present one or two hundred years ago?
 - How has the development of new foods affected our eating behavior?
 - How do food advertisements influence the foods we eat?

Corn was eventually adopted as a food by some people of Southern Europe. However, many Europeans were never willing to even try it. This is an example of the strength of food habits. People for whom wheat bread had been the staple food for centuries were not interested in eating anything different.

Some of our attitudes about foods that others eat may be negative. These are frequently acquired from conversations or observations of others, especially parents or other close relatives, who have developed a dislike or who themselves are reluctant to try something different. However, today, as a result of TV and other sources, we learn about many unusual foods.

They will find that Columbus and his crews sailed from Lisbon on September 6, 1492. The reason they did not develop scurvy was that the voyage was not long enough for healthy men to become ill or to die from vitamin deficiency. This may be a good time also to introduce the concept that symptoms of nutrient deficiencies generally take some time to appear.

You may want to combine some of these experiences with social studies by discussing some of the early explorers to America. Include in the discussion how these explorers often ran out of fresh fruits and vegetables during their long voyage across the ocean and what effect the lack of these foods had on their health. Ask the class to list some of the new foods the explorers discovered, such as corn and squash.

 Nutrition Education

Why We Like Certain Foods

35. Have the pupils examine their own eating patterns.

- . Compare their own eating pattern with others in their family. Are there similarities? Why?
- . Where do our eating practices originate?
- . Compare with their peers. Are there similarities?
- . What can be concluded from these comparisons?

Many of our eating patterns are established early in life through family food practices. As we grow older and expand our social environment, peer influences come into play. Also, food advertisements are also strong influences.

It might be interesting to identify and discuss some of the special kinds of foods Americans eat; for example, New England clam chowder and Manhattan clam chowder, Soul food, Mexican food, Oriental food, Italian food, and Polish food. This show the importance of cultural influences in regard to the wide variety of foods eaten in this country.

Students in small groups can find out about a particular food through library research and through resource persons. Simple foods may be prepared by the pupils in order to taste them. More elaborate dishes perhaps could be prepared in cooperation with the school food services, the home economics department or by parents.

Nutrition Education



Super Sandwich

Make up a new kind of sandwich which sounds funny but would taste good and is nutritious.

What would you call your sandwich?

What else would you eat for lunch with your sandwich?

Go home and make this sandwich and have one other person you know eat it with you.

Write a story about your sandwich and how your family liked eating it.

8. DOOFUS GETS THE KNACK OF SNACKS

Specific Concepts/Skills:

Sleep

1. Children need enough sleep in order to stay alert throughout the day.

Breakfast

1. Breakfast is an important meal.
2. Skipping breakfast may result in
 - less energy throughout the morning
 - less attentiveness to work and play
 - irritability
3. Breakfast should contain a variety of nutritious foods.
4. Breakfast can feature non-traditional foods.

Snacks

1. Snacks may be a nutritious food source. This depends on the child's or his/her parents' choices.
2. Healthy snack choices might feature;
 - less salt - less sugar - fewer fats (fried foods) in keeping with the suggested Senate Committee goals for the American diet.
3. Sugary snacks and sticky foods may cause cavities.
4. Nutritious snacks should be substituted for "empty calorie" foods which contain few or no nutrients.

Brushing Teeth

1. Brushing teeth after eating is important for reducing the chance of cavities. Rinsing the mouth immediately after eating is a good alternative when brushing is inconvenient.
2. It is best to brush at least twice a day, especially after breakfast and after supper (before bedtime). Brushing before breakfast is important mainly as a breath sweetener.

New Vocabulary:

cavities

toothache

plaque

Notes to the Teacher:

Four important issues are stressed here--the importance of getting enough sleep, eating a nutritious breakfast, making healthy snack choices, and brushing teeth regularly. The issues are all related to choices the child can make him/herself, although parental and teacher support is very helpful.

DOOFUS GETS THE KNACK OF SNACKS (cont'd)

Try to encourage reduced consumption of refined sugar in sugary snacks.

The film "Eating On The Run" might be a good introductory activity for this chapter as it focuses on a variety of choices for balanced but quick breakfasts and snacks. The Four Food Groups categorization in the film can be considered in a general way this early in the curriculum. Begin to classify foods into different kinds (see what kinds of categories the children invent) and stress variety in diet.

Activities:

1. Keep track of breakfast diary
2. Show the film "Eating on the Run." Have children each decide what they would make for a "quick" nutritious breakfast. Children go home and make it and have their parents or an older brother or sister time how fast it took them to make it. Class compare breakfasts and times.
3. Compare different breakfasts and classify according to whether the foods have plant or animal origins.
4. Role-play:
 - a) what to eat for breakfast if you make your own
 - b) a friend visits and doesn't like your favorite breakfast
 - c) eating breakfast in school or at a restaurant
 - d) you get to school without having eaten breakfast
 - e) you're out of your favorite breakfast food
 - f) your parents are encouraging you to eat a breakfast food you don't like
5. Make a class breakfast, possibly including parents. Use some non-traditional breakfast foods and breakfast foods of other cultures (see "What Did You Have for Breakfast?" Diary Council booklet). Have a pancake breakfast.
6. Have students write a favorite snack food on a piece of paper. Collect and add to make class bar graph (save for comparison later).
7. Compare different snack choices regarding content of refined sugars, salt and saturated fat. Divide the class list of snacks into categories: salties, sweeties (refined sugars), fatties (like potato chips) and fitties (like fresh fruits and unsalted peanuts that contain vitamins, minerals or protein nutrients). Some snacks will fit into more than one category.
8. Make own snacks in school and share snack ideas. Set up a snack stand and sell to other children.
9. Invite a dentist or dental hygienist to class to demonstrate proper brushing methods. Have students bring in their own toothbrushes for the demonstration.

10. Demonstrate the use of red disclosure tablets on teeth after snacks to check brushing proficiency. Have extras on hand for children who are interested in taking them home.
11. Put a raw egg in vinegar overnight or a tooth in a glass of Coca Cola to show the effect of acids on enamel.
12. Show a filmstrip on the importance of good dental hygiene. Suggestions: "Report Card Day" a Nancy and Sluggo filmstrip by Colgate. "The Invisible Invaders" by Crest.
13. Compile a healthy snacks booklet with the aid of parents. Contribute snack ideas to the school newspaper.
14. Have a time-telling lesson based on the time the children go to bed. Figure out the number of hours of sleep.

What I Eat At Home

In order to master this objective, students must be able to identify the foods they eat at home for a one week period.

Use the following chart for student to indicate the foods they ate at home for that period of time. It is not important at this point to have the foods broken into groups or categories.

	BREAKFAST	LUNCH	SUPPER
MONDAY			
TUESDAY			
WEDNESDAY			
THURSDAY			
FRIDAY			

FOODS WE EAT AT HOME

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
2. Students will identify the origin of those foods eaten at home (animal, plant).	1. Have students list foods which they ate at home during a one day period. Use material in "Where Do Foods Come From" to provide students with information about the origins of their food lists. (K-3)	1. Nutrition Education K-3 pp. 18-20
	2. Use "Let's Go Exploring" to reinforce the concepts presented in Activity 1. (K-3)	2. Let's Go Exploring Cards 11-18
	3. Use "Thirst Quenchers" to assist the students in determining the origin of the beverages that they drink for snacks. (K-4)	3. "Be A Choosy Chewer" Card #17
	4. Ask your student to discuss where eggs, milk, and yogurt come from. Use "Doofus Down On The Farm" to provide additional information about dairy products.	4. Doofus p. 52
	5. Use the "Origins Checklist" to measure the students mastery of this objective.	

SUB-TOPIC: Where does food come from?

ENABLING OBJECTIVE: The learner is able to list places where people get their food.

LEARNER ACTIVITIES

16. Have the children identify the varieties of foods that come from plants. List at least 5 for each general category according to those that are the flower, leaf, stem, and root of plants.

- . Which foods listed have the learners tried?
- . Which ones do they like?

17. Where do different foods come from?

- . Where does milk come from?
- . Where does meat come from?
- . Where do fruits and vegetables come from?
- . Where do cereals and bread come from?
- . Where do eggs come from?
- . Add, also, some prepared foods such as pasta

19. Using pictures of animals, discuss which meats come from various animals; especially those not obvious by their names. For example, hamburger, steak, sausage, ham, bacon, liver.

20. Plan and conduct a visit to a bakery so that the class can observe how bread is made.

21. Using pictures or food models, discuss where different foods come from. Concentrate especially on some of the less obvious ones: e.g., peanut butter, cheese, raisins, jams and jellies, cereal and bread.

TEACHER INFORMATION

Obtain the booklet, Where We Get Our Food from the office of the Dairy Council. Other materials available from the Dairy Council appropriate for this area are: "Uncle Jim's Dairy Farm," a film and booklet, the booklet, More Milk Please, and the filmstrip "Life on a Dairy Farm."

The pupils should understand that the farmer produces and sells the food from his farm. The food is then prepared to go to the supermarket where we buy it. It may also be interesting to discuss some of the synthetic foods being made; e.g., imitation bacon from soybeans.

It is desirable for the children to understand that cereal and bread come from grain which grows on the farm, that the grain is ground to make the flour that is used for making bread. Die-cut food models are available from the regional office of the Dairy Council.

A miniature, inclass store can be built using empty cartons, food containers, canned foods, etc. This activity can be used in conjunction with mathematic experiences as well.

22. Make a list on the chalkboard of all of the people who are involved in handling foods. They may include:

- . The farmer
- . People who work in the supermarket
- . The butcher
- . The baker
- . The truck driver

23. As a culminating experience have the children act out roles of shopper, storekeeper, and so on. Use empty food containers for stock and some real foods that may be eaten by the pupils as a snack.

Strengthen the learners' vocabulary. Some words used during these activities:

apple	farm	peach
baker	farmer	pear
bread	favorite	raw
butcher	food	seed
butter	food-like	sight
cheese	fruit	smell
color	juicy	sweet
cooked	milk	taste
cream	nonfood	texture
cow	odor	vegetable
egg	party	yogurt

Let's Go Exploring

Animal or Plant?

- . Sort pictures of foods--plant or animal origin?
- . Play store with food pictures or wrappers. Ask each child to buy two animal foods and two plant foods.

Animal Foods We Eat

- . On the board, write a short list of nutritious foods we get from animals. Ask the children to copy the list and write the name of the animal it comes from beside each food.
- . Play "I Spy." Describe an animal food and have the children guess what it is. What animal does it come from? Or, let the children describe an animal food.

Plant Parts We Eat

- . On slips of paper, write the names of foods that come from different plant parts. Put each slip in a balloon. Blow up and tie the balloons, and tack them to a bulletin board or give one to each child. Pop the balloons and have each child determine what part of the plant that food comes from. Ask the children to group according to their foods--root foods in one corner, stem foods in another corner, and so on. Are they right?

Note

This could also be done using the pinata. Let the children make a paper-mache pinata in the shape of a fruit and fill it with the slips.

- . Play "Plant Bingo." Use the headings of root, stem, leaf, fruit, and seed.
- . Play a "plant letter" game. "Can you think of seed food that starts with the letter W?" (wheat)

Let's Go Exploring, Division of Nutritional Services, New York State Education Department, 1980.

Let's Go Exploring

Animal Bingo

- . Put on "explorer's hat".
- . Explain that the animal foods we eat do not all come from the same animal. "Can you name some animals we get food from?"
- . Do the activity "Exploring a Farm." Help the children identify the farm animals and ask, "Can you name some foods we get from these animals?"
- . Play "Animal Bingo"! Give each student a copy of the Bingo sheet. Call out the name of an animal food and ask the children to place a bingo chip anywhere they wish under the appropriate column heading. The first player to get a horizontal, vertical, or diagonal line wins!

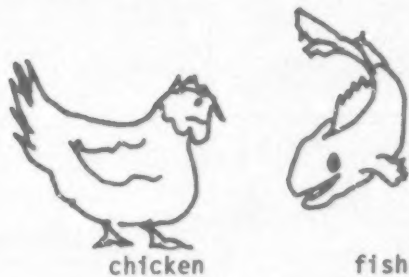
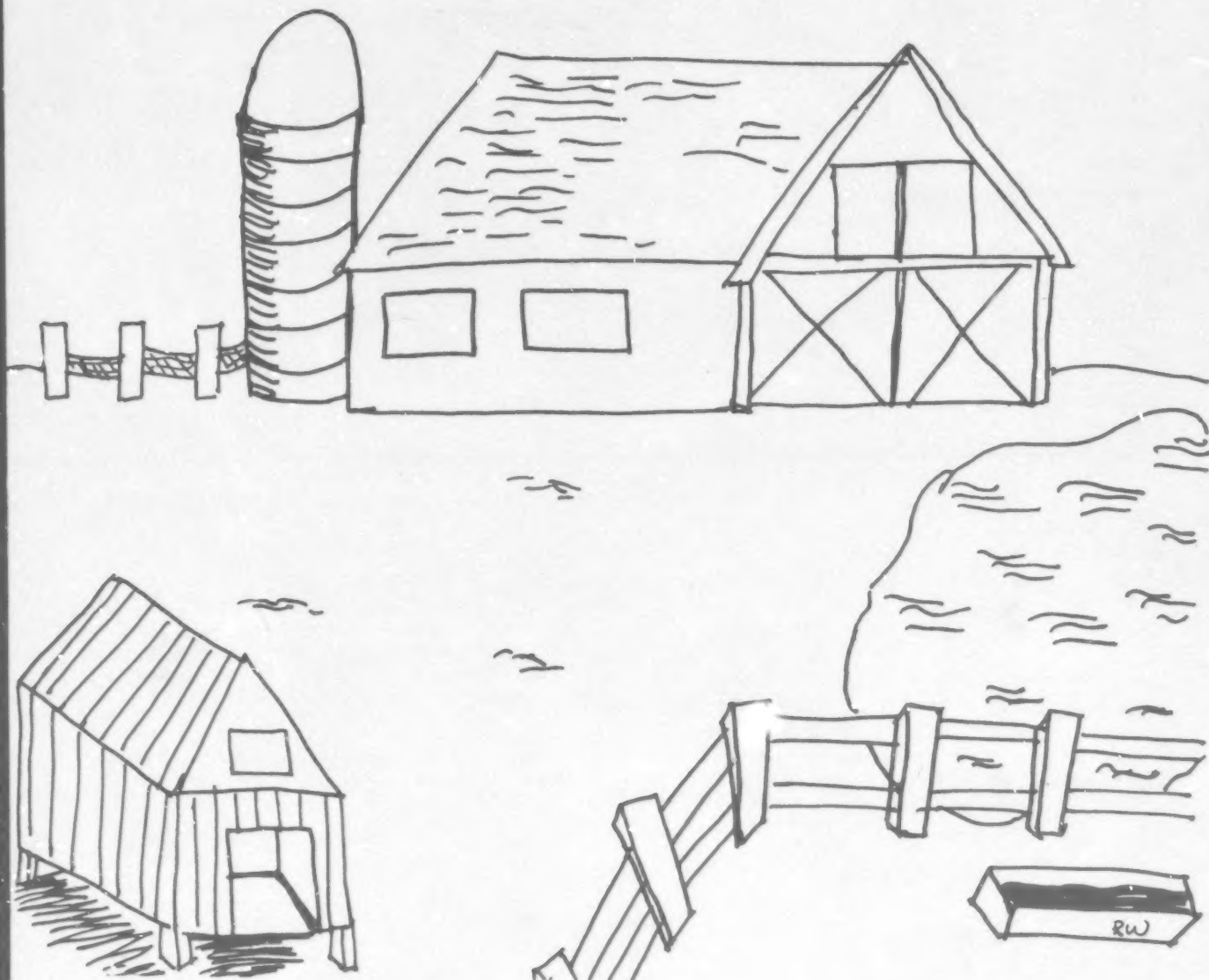
ANIMAL BINGO

Name _____

Beef	Dairy	Pig	Poultry	Fish
		FREE!		

EXPLORING A FARM

Cut and paste these animals where you think they live.
Can you name some foods we get from these animals?

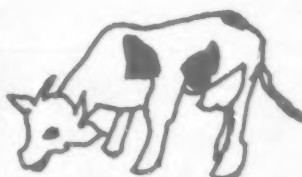


chicken

fish



lamb



cow



pig

Where Do Foods Come From?

Understanding the origins and growth of foods helps children become familiar with a wide variety of foods. At the same time, it aids in their understanding of how foods and nutrients relate to personal growth.

Although many foods can supply us with important nutrients, no one food has all the nutrients we need. Only by eating a diet containing a wide variety of foods that are good sources of the essential nutrients can we be sure to get the right nutrition for optimal growth and body function. In learning where foods come from, children have a perfect opportunity to expand their familiarity with a wide variety of nutritious foods.

Learning about food origins is fascinating, and it helps form a solid information base for later learning about the nutrient qualities of various foods. It's a natural when exploring food origins to look at how the foods themselves grow and what they require for growth. Through these explorations, children can draw parallels between plants' and animals' needs for nutrients to their own needs for nutrients for personal growth!

WHERE DOES FOOD COME FROM?

The foods we eat do not originate in the supermarket! They come from animals and plants!

Animal?

The animal foods we eat do not all come from the same source. The children can learn to categorize foods by the type of animal they come from.

. . .or. . .Plant?

We eat different plants, and we eat different parts of plants--seed, root, stem, leaf, and fruit.

Dairy Foods

buttermilk
cheeses
cottage cheese
ice cream
milk
yogurt

Poultry

chicken
duck
eggs
goose
turkey

Seed Foods

barley
corn
dried beans
dried peas
lentils
most spices
oats
peanuts
rice
rye
wheat

Root Foods

beet
carrot
cassava
onion
potato
rutabaga
sweet potato
turnip
yam

Beef

corned beef
hamburger
liver
meat loaf
pastrami
pot roast
steak

Pork

bacon
ham
pork chops
spare ribs

Stem Foods

broccoli
cauliflower
celery
chives
mushrooms
rhubarb

Leaf Foods

brussels sprouts
cabbage
collard greens
escarole
parsley
spinach
Swiss chard
turnip greens

Fruits Commonly Referred to as Vegetables

cucumbers
eggplant
fresh beans
green peppers
pumpkin
squash
tomatoes

Fish and Seafood

clams
crab
fish sticks
haddock
lobster
oysters
perch
salmon
shrimp
tuna

Lamb

lamb chops
lamb roast
leg of lamb

Fruits

apples
apricots
avocados
bananas
blueberries
cherries
grapefruit
grapes
lemons
limes
melons
oranges
peaches
pineapples
plantain
plums
pomegranates
raspberries
strawberries

Let's Go Exploring

Discovering Plant Parts

- . Put on "explorer's hat"!
- . Make plants and foods flannelboard pieces and use them to discuss different plants and plant parts we eat. Assemble each plant piece-by-piece on the flannelboard.
- . It's riddle time!
Make up some riddles and let the children guess. The children can answer verbally or write or draw the answer (see examples at right).
- . Let the children make up riddles about food plants for the whole class to guess!
- . Help the children identify the foods, by reading the name of each one for the students to circle. Also help them decide what parts of the plants are edible.



Key

1. Cabbage (leaf)
2. Spinach (leaf)
3. Tomatoes (fruit)
4. Grapes (fruit)
5. Broccoli (stem)
6. Celery (stem)
7. Turnip (root)
8. Carrot (root)
9. Strawberries (fruit)
10. Oranges (fruit)
11. Pineapple (fruit)
12. Eggplant (fruit)
13. Green peppers

I am yellow corn.
I live on a cob.
Sometimes I go pop!
People often plant me.
What part of the plant am I?
(seed)

I am orange and wear a green cap.
I am long and crunchy.
I grow under the ground.
I am a root.
What am I?
(carrot)



Let's Go Exploring

What's for Lunch?

- . Get together with the school food-service people! With a copy of the cafeteria menu, plan a few cafeteria displays featuring various menu items, explaining what part of the plant they come from, or what animal! You could also hang a class mobile in the cafeteria.
- . Make a class fruit, seed, stem, root, and leaf mobile:
 - Break the class into five groups and assign each group to draw foods that come from one part of the plant.
 - Make a collage of the drawings within each group and make a mobile of all five collages. Label each collage and hang the mobile in the classroom or cafeteria.



Thirst Quencher

Where does it come from?

Bring in cans and packages of things to drink. Try to bring one of each kind from this list:

orange juice	tomato juice
orange soda pop	apple juice
orange kool-aid	milk
Hi-C drink	grape juice
cola	

Use the packages to make a chart of things to drink. Take out a piece of paper and fold it in half. Copy the names from the labels onto your paper. Write each name in either Group I or Group II

Put Group I on the top half of your paper, and Group II on the bottom half.

Group I: These come from plants and animals.

Group II: These are manufactured from water, sugar and flavoring.

Sometimes it's hard to tell what to drink for a good snack. The label can help!

Does the label say "juice"? Then it must be 100% pure juice, from oranges, tomatoes, apples, grapes.

If it has less juice, the label must say "drink." Drinks have sugar and water and flavoring; they are not all juice.

That's why we say, "Think What You Drink!"

A class snack

Try making a punch by mixing juices or mixing milk and juice, like Orange Shake or Witch's Brew. Your teacher can show you how.

Both have lots of vitamin C, a nutrient we need every day to keep our gums, muscles, veins and arteries healthy.

Can you make up your own nutritious drink? Try mixing a juice and milk!

Be a Choosy Chewer, Division of Nutritional Services, New York State Education Department, 1980.

4. Doofus Down on the Farm

Specific Concepts/Skills:

1. Some foods come from animals.
2. Milk comes from a variety of mammals, including cows and humans. It is the first food for all young mammals.
3. Milk is a good source of protein and minerals like calcium.
4. There is a wide variety of products made from milk, including cheese, yogurt, butter and ice cream.
5. Eggs come from birds, including chickens.
6. Eggs are a common source of protein and minerals like iron.

New Vocabulary:

udder protein minerals calcium iron

Notes to the teacher about the story:

This is an excellent opportunity to discuss the different kinds of milk used in different cultures. Explore cooking and making different milk products. Compare the life cycle of animals to plant life cycles.

Activities:

1. Divide a large class graffiti sheet into two parts--plant foods and animal foods. Have students draw in or write some of their favorite foods in the appropriate category.
2. Discuss where milk comes from.
3. Compare different milk products.
4. Make yogurt.
5. Make ^{or}cottage cheese, or ice cream.
6. Have a tasting party of milk products.
7. Egg games
 - Egg-dropping contest; ways to keep eggs from breaking.
 - Egg-on-spoon relays.
 - Coloring eggs--Easter egg art.
 - Can you figure out whether an egg is hard-boiled or fresh? (spin the egg)
 - How much pressure does it take to make an egg break.
 - How to get the egg (hard-boiled and shelled) into the bottle? (Place a small burning piece of paper inside a bottle with an opening slightly smaller than the egg. Gently place egg in opening to create a seal.)

8. Cook a variety of egg recipes--note how the egg changes from liquid to solid--omeletes, egg-drop soup, custards, meringues, etc. Tie this in with a class breakfast.
9. Hatch chicken eggs.
10. Read Green Eggs and Ham. Have a class breakfast with green eggs colored by spinach juice.
11. Visit a cheese factory.
12. Make pancakes with and without eggs to see eggs' effect. Try no-egg batter, one-egg and two-egg batters. Compare results.

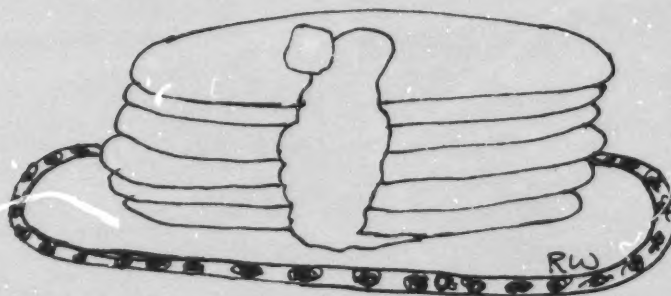
Resources:

Creative Food Experiences, M. Goodwin & G. Pollen
The Farm Book, Charles Roth & R. J. Frochlich
Green Eggs and Ham, Dr. Seuss
Green Grass and White Milk, Alike
Hard Scrabble Harvest, D. Spear
My Friend the Cow, L. Lenski
"We All Like Milk" study prints, Dairy Council

Charts:

The following charts may be obtained from the Learning for Life office:

"Doofus Says" (Animal Foods, Minerals and Protein)
 "Nutrient Stars - Calcium"
 "Nutrient Stars - Iron"



Doofus Gets the Knack of Snacks

Try to encourage reduced consumption of refined sugar in sugary snacks.

The film "Eating on the Run" might be a good introductory activity for this chapter as it focuses on a variety of choices for balanced but quick breakfasts and snacks. The Four Food Groups categorization in the film can be considered in a general way this early in the curriculum.

Activities:

1. Keep track of breakfasts in a breakfast diary.
2. Show the film "Eating on the Run." Have children each decide what they would make for a "quick" nutritious breakfast. Children go home and make it and have their parents or an older brother or sister time how fast it took them to make it. Class compares breakfasts and times.
3. Compare different breakfast and classify according to whether the foods have plant or animal origins.
4. Role-play:
 - a. What to eat for breakfast if you make your own
 - b. A friend visits and doesn't like your favorite breakfast
 - c. Eating breakfast in school or at a restaurant
 - d. You get to school without having eaten breakfast
 - e. You're out of your favorite breakfast food
 - f. Your parents are encouraging you to eat a breakfast food you don't like
5. Make a class breakfast, possible including parents. Use some non-traditional breakfast foods and breakfast foods of other cultures. Have a pancake breakfast.
6. Have students write a favorite snack food on a piece of paper. Collect and add to make class bar graph (save for comparison later).

Origins Checklist

Reproduce and distribute the following checklist. Have students complete this worksheet as a tool to see how well they have mastered the objective.

FOOD	Meat	Dairy	Poultry	Seed Food	Root Food	Fruit	Starch Food
Cheese							
Eggs							
Corn							
Chicken							
Ice Cream							
Milk							
Peanuts							
Rice							
Carrots							
Potatoes							
Hamburger							
Yogurt							
Bacon							
Broccoli							
Peppers							
Peaches							
Lamb Chops							
Grapes							
Apples							
Tomatoes							
Greens							
Shrimp							

FOODS WE EAT AT HOME

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
3. Students will categorize those foods eaten at home according to function and nutritional value and will be able to discuss the need for good nutrition.	1. Show the class a can of cola and a container of milk. Compare the labels. Use this as a lead in for "Think What You Drink."	1. "Be A Choosy Chewer" Card #5
	2. Show the students a bunch of fresh broccoli. Use the procedure in "Eat Orange and Greens" to assist students to master performance objective 3.	2. "Be A Choosy Chewer" Card #13
	3. Ask the students to list five foods which are eaten most frequently at home. Categorize this list by meats, vegetables, fruits, etc. Have the students plan tasting parties based on their lists and on the material contained in "Let's Have a Party."	3. Nutrition Education K-3 pp. 15-17
	4. Ask the students what they think that the Big Four means in relationship to food. Use this discussion as motivational activity for "The Big Four."	4. Nutrition Education K-3 pp. 27-31
	5. Ask the students what parts of their bodies are designed to help them use the food which they eat. Use "How the Body Uses Food" to present information about the gastrointestinal system. (4-6)	5. The Doofus Stories pp. 3-4
	6. Use "What Is Good for Me Checklist" as a follow up to determine mastery of this objective. (2-6)	

Think What You Drink

The food choices you make are important. Your growth, your health, and the way your skin and eyes look are controlled by nutrients found in food.

For example, milk is a food that makes your bones grow.

Sometimes we pick a soft drink instead of milk. A bar graph can help you decide which is a better choice.

A. Names of nutrients:

	soft drink	milk
protein	_____	_____
sugar and starch	_____	_____
fat	_____	_____
vitamins	_____	_____
minerals	_____	_____
water	_____	_____

Can you tell:

1. Which drink has more good things in it?
2. What nutrients are in both the soft drink and milk?
3. Why do people say that soft drinks have "empty" calories?

Answer: You can see that soft drinks have sugar and water, but all the other nutrient boxes are empty!

Be a Choosy Chewer

B. Where does it come from?

Bring in cans and packages of things to drink. Try to bring one of each kind from this list:

orange juice
orange soda pop
orange kool-aid
Hi-C drink
cola
tomato juice
apple juice
milk
grape juice

Thirst Quenchers

Use the packages to make a chart of things to drink. Take out a piece of paper and fold it in half. Copy the names from the labels onto your paper. Write each name in either Group I or Group II.

Put Group I on the top half of your paper, and Group II on the bottom half.

Group I: These come from plants and animals.

Group II: These are manufactured from water, sugar, and flavoring.

Sometimes it's hard to tell what to drink for a good snack. The label can help!

Does the label say "juice"? Then it must be 100% pure juice, from oranges, tomatoes, apples, grapes.

If it has less juice, the label must say "drink." Drinks have sugar and water flavoring; they are not all juice.

That's why we say, "Think What You Drink!"

C. A class snack

Try making a punch by mixing juices or mixing milk and juice, the Orange Shake or Witch's Brew. Your teacher can show you how.

Both have lots of vitamin C, a nutrient we need every day to keep our gums, muscles, veins and arteries healthy.

Can you make up your own nutritious drink? Try mixing a juice and milk!

Eat Orange and Greens

You are going to meet a new friend I found in my Magic Cupboard--Mr. Broccoli. Ask your school lunch manager for a poster of him.

A. Meet Mr. Broccoli

Have you ever looked at fresh or frozen broccoli?

. What part of the broccoli plant do we eat?

leaf	stem	seed
flower	fruit	root

. What color is it?

. Do you have any idea why Mr. Broccoli says, "Eat Orange and Greens!"

Answer: Dark green and yellow/orange vegetables have lots of vitamin A, which helps your skin and eyes.

B. Vegetable kites

Take magazines and cut out pictures of all the vegetables you can find. Now try this:

Put all the vegetables that are dark green or bright orange into a pile.

How many are there? Name them.

Paste the vegetables onto pieces of cardboard. On the back of each picture, write the name of the vegetable. Hang them from strings on a piece of wood to make a mobile.

Attach a string like a kite tail to each food.

Paste a gold star on the string every time someone in the class tastes it.

___ Be A Choosy Chewer

C. Taste test

Taste these vegetables, raw or cooked. Have you ever tried--

Stir-Fry Broccoli

You need: electric fry pan or wok
4 tablespoons oil
4 vegetables cut in very thin diagonal slices (broccoli,
carrots, celery, onion)
paper plates
forks
napkins
an adult to help you

Stir-fry 1 1/2 cups of vegetable, one at a time in 1 tablespoon of oil. It
only takes 1 - 3 minutes until they are crisp and tender. Taste.

Let's Have a Party

ENABLING OBJECTIVE: The learner is able to identify a variety of familiar and new foods.

LEARNER ACTIVITIES

8. Have a tasting party so that the children can sample different kinds of vegetables.
9. Have the children participate in preparing the foods for the party. Ask the children which foods they liked best. List these on the chalkboard and discuss why they are favorites. Include taste, color, texture, feel, and odor, in the discussion.
10. On another day, have a tasting party that includes fruits.
 - . Can the seeds be eaten?
 - . Do people usually eat the seeds of fruit?
 - . Discuss the purpose of seeds for the fruit; as a food.

TEACHER INFORMATION

Much language arts learning can take place through nutrition education. Letters and words can be learned better when they are associated with real life experiences. Since all people must eat and most people enjoy experiences with foods, nutrition learning can act as the motivator and vehicle for learning to read. (Consult with your librarian about books dealing with foods that are appropriate for your pupils.)

Nutrition experiences can also be the vehicle for art, science, and social studies.

Be certain that some of the vegetables for the party are familiar to all of the children, but also include some unusual ones.

Have available in raw form some vegetables that are usually eaten cooked. For example, include pieces of cauliflower, turnip, etc.

Be sure that the children notice the seeds in the fruit. Discuss the variations in the size and number of seeds.

11. Compare fruits and vegetables.

- . How are they alike?
- . How do they differ?
- . Do fruits and vegetables both have seeds?
- . How do the tastes of fruits and vegetables generally differ?
- . Does the texture of the fruits or vegetable add to the pleasure of eating it? In what ways?

12. Have the children identify many milk products with which they are familiar:

- | | |
|------------------|------------------|
| . butter | . ice cream |
| . cheese | . chocolate milk |
| . buttermilk | . yogurt |
| . whipped cream | . sour cream |
| . cottage cheese | |

13. How many different kinds of cheeses can the class identify? Discuss how some of the cheeses are made.

- . What makes the flavors different?
- . Are some cheeses identified with certain countries?
- . Is the texture of different cheeses different?
- . Does this add to the pleasure of eating them?

14. Have a tasting party with several of the pupils blindfolded. Use foods with similar textures; e.g., apple and onion, lettuce and spinach, and pear and peach.

- . Does the look of food make a difference in taste?
- . Are children more apt to try an unfamiliar food if they don't know it?
- . What are the children's reactions to certain foods? List these reactions on the chalkboard and discuss why there are different as well as similar reactions.
- . Can the children identify foods by taste and texture?

The children should note that the texture of fruits and vegetables are quite different, for example, fruits are generally sweet and juicy. In making comparisons, discuss taste, texture and so on, but also discuss nutrient values of fruits and vegetables. Compare this with some other foods that pupils are more likely to eat; e.g., potato chips, etc.

A tasting party is useful in teaching about the different foods that are made from milk. Often a child will try a new food or even eat one that he or she dislikes if the rest of the class is trying it. In conducting a tasting party, present the foods to be tasted in small portions, preferably bite-sized pieces that can be picked up in the fingers so that the texture can be felt. Teach the children the name of the food.

Encourage each child to try every food. Don't, however, force a child to eat a food he or she refuses. Similarly, don't make an issue out of a dislike expressed by a child.

List the different kinds of cheeses on the chalkboard.

This activity can also be done with cereals, breads, beans, and other foods that come in a variety of forms.

Although tasting parties are generally simple to conduct, they may require some preplanning. This is especially true when specific objectives are involved such as having the pupils learn that some foods have similar textures but may have quite different tastes. It may be helpful to have some parents involved in planning these tasting parties. They could contribute some of the foods and this may eliminate the need to buy a variety of foods for this purpose.

The basic concept being developed with this activity is that the

. What part does the sense of smell play in the taste of some foods?

appreciation of food depends on more than just taste. Sight, smell and texture all are involved in our reactions to foods.

15. Make butter. Have the children take turns doing the beating or churning.

Give each child a taste at the whipped cream stage. When the butter is made, for a snack spread the butter on a piece of bread for each child and provide milk to drink.

To make butter, start with heavy cream. Beat the cream with an egg beater until butter is formed. The whipped cream stage will appear before the butter stage is reached. Butter can also be made by placing some heavy cream in a jar with a screw-on lid and shaking the jar vigorously.

After the butter forms, pour off the liquid (buttermilk). Add a pinch of salt to the butter.

The Big Four

ENABLING OBJECTIVE: The learner is able to describe how the four food groups can be used as a guide for food selection.

LEARNER ACTIVITIES

46. Discuss the four food groups
 - . What are the four food groups?
 - . Do these groups provide us with basic and sound criteria for selecting nutritious foods?
 - . What serving sizes for each group are recommended?
47. Using food models, have the pupils sort foods into the four food groups.
48. Have pupils keep a record of their food intake for two or three days. Classify foods eaten into the food groups. Evaluate the adequacy of the diet on the basis of the food groups.
 - . What about the foods that are not in the four groups?
49. Have the pupils plan a day's diet for individuals with special concerns as follows:
 - . Someone allergic to citrus fruit
 - . Some whose religion forbids eating beef or pork
 - . Someone who has no stove
 - . Someone who has no refrigerator
 - . Someone who does not have time to cook.

TEACHER INFORMATION

Obtain from the office of the Dairy Council posters illustrating the four food groups.

Food models are available from the office of the Dairy Council.

Be sure that pupils take into consideration serving sizes as well as the specific food.

There is a fifth food group which consists chiefly of those foods that contain nothing more than "empty calories."

Because of the varieties of foods available to us, it is still possible to receive an adequate diet. For example, persons who are allergic to citrus can still get their vitamin C from cabbage, tomatoes or potatoes and other fruits and vegetables.

50. Evaluate the pupils' knowledge of the basic food groups. Present them with a list of foods that a child might eat in a day. Make the list of foods void of one group of foods. Have the pupils suggest snacks that would make the day's menu adequate.

This could also be done with several small groups of students with each group analyzing a menu lacking in a different food group. For example, the following sample is lacking in the bread and cereal group:

3 glasses of milk
chopped beef patty
cottage cheese
glass of orange juice
an apple
carrot sticks
peas
tossed salad

51. Have the class plan a menu for the school lunch for a day. The class should develop a way to publicize to others that they planned the menu, and which day it is to be served. Records of the numbers of pupils eating the lunch and of the plate waste should be kept. Compare with an average day.

This should be a cooperative effort between the class and the director of food services. The director of food services could discuss the requirements for a type A lunch and interpret any restrictions placed on the foods to be served so that the menu planned by the class could be served in the cafeteria. Using the technique of voting on disagreements, a group decision process can be used. This also reinforces the learnings about accepting foods even though they are not favorites.

TOPIC: How the Body Uses Food

SUB-TOPIC: Digestion and Absorption

TERMINAL OBJECTIVE: To comprehend how the body receives and used nutrients.

ENABLING OBJECTIVE: The learner is able to describe how food is processed by the body after ingestion.

LEARNER ACTIVITIES

52. On a large picture or a flannel-board representation of the human gastrointestinal system, demonstrate the path that food takes in the body.
53. On a diagram of the gastrointestinal system, have the pupils label each major part, learning how to spell the correct names.
54. Have pupils cut out and put together the structures of the gastrointestinal system.
55. Discuss this statement: The gastrointestinal system is a hollow pipe going through the body.
56. Illustrate that peristaltic action forces food along the gastrointestinal system regardless of gravity by showing that one can swallow uphill.
57. Discuss the significance that this has for space travel.
 - . What was the problem related to serving food in space?
 - . How was this problem solved?

TEACHER INFORMATION

The chief structures of the gastrointestinal system are the mouth, esophagus, stomach, small intestine and large intestine.

It may be effective to discuss the chief functions for each of these structures in relation to digestion and absorption.

Distribute to each pupil a dittoed sheet containing simplified drawings of the chief structures of the gastrointestinal system that are arranged randomly on the page and unconnected.

Although this statement is basically true, the pupils should understand that there are many stops along the way and that the food we eat undergoes radical changes through the process of digestion. These changes are necessary before the body can make use of the nutrients contained in the foods.

A student can stand on his or her head with feet against the wall for steadiness and drink water, milk or juice through a straw.

Since in space there is no gravitational force, scientists would have had to develop some way for astronauts to eat. However, since the human ability to swallow does not depend upon gravity this posed no problem for space travel. One problem related to eating in space that needed to be dealt with was the serving of food. Without gravity, it is not possible to serve foods on a plate, in a cup or glass because the food would simply float away.

SUB-TOPIC: Cells and Their Need for Nutrients

ENABLING OBJECTIVE: The learner is able to describe the structure and function of body cells.

LEARNER ACTIVITIES

58. Have the pupils cut an onion in half. Peel off an inside layer. On the outside of this layer they will find a transparent skin that is very thin. Have them pull off a small piece of this skin and place it in a drop of water on a glass slide. Flatten the tissue out with a toothpick and cover with a cover glass.

59. Have the pupils look at the cells through the low-power lens of the microscope.

- . How do the cells fit together?
- . Are nuclei present? Why?
- . What do the cells look like?

60. Have the pupils change to the high-power lens.

- . What new things have become visible?
- . Is the nucleus of the cell present?
- . Is the cell membrane visible?
- . Is the cell wall visible?
- . What would happen to the cell if the nucleus were removed?
- . Why was the use of iodine necessary?

TEACHER INFORMATION

Use an informal pretest to ascertain the pupils' level of understanding of cells. Select activities that are most likely to build upon the pupil's present knowledge. A simple way of mounting the onion skin is to drop a small piece in a dish or bowl of water, place the slide under the skin and lift the slide. The onion skin will be mounted on the slide. Cover with a cover glass.

Materials needed for this activity are: onions(s), knife, compound microscope(s), toothpicks, glass slides, cover glasses, eye dropper, iodine.

Note: Methylene blue or ink may be used in place of iodine. Caution the children to handle these with care, they can stain clothing and iodine is poison.

Although not all of the nuclei will show up because of the thickness of the cell, some should be visible. The cells should appear like bricks in a wall; each "brick" is a cell. Each cell should contain a dark spot inside it. This is the nucleus of the cell. If it is removed or destroyed, the cell will die.

Each cell also has two thin lines around the outside. The inner line is the cell membrane while the outer one is the cell wall.

Note: If enough microscopes for pupil use are not available, it may be possible to obtain a micro-projector from the science department so that all pupils can observe the demonstration at the same time.

61. Have the pupils examine animal cells and compare these with the plant cells already observed. Pupils should examine the material under the low-power lens of the microscope first, then with the high-power lens.

- . What do you see?
- . Are the cells of the cheek different from the cells of the onion?
- . Is a nucleus present?
- . Is there a cell membrane? A cell wall?

62. Draw pictures of the two kinds of cells observed under the microscope.

- . Label the parts of each.
- . How do they compare?

66. How can we demonstrate that large molecules cannot cross the cell membrane while small ones can? Describe what has taken place.

- . Was there a change in both "cells"? Why?
- . What caused the change?
- . What can be concluded?

67. Conduct an experiment to discover the purpose of calcium. Place a chicken bone in a jar and cover it with vinegar. Leave it for several days, examining it at intervals.

To obtain human cells, have the pupils scrape the inside of their cheek or lip with a toothpick, scrape some of the white material on the toothpick into a drop of water that has been placed on a glass slide. Have them spread the material out in the water, add a drop of iodine, and place a cover glass over it.

The pictures could be drawn one on each half of a sheet of paper with the labels in the middle. The parts that should be labeled are the cell wall (onion cell only), cell membrane and nucleus. Have the pupils compare animal cells with plant cells. The animal cells do not contain a cell wall, only the cell membrane.

Materials needed are the gelatin cell models, iodine, clear bowls or jars, and water. This can be conducted as a class demonstration or with several pupils doing the experiment. Fill two jars about 3/4 full with warm water. Add enough iodine to one jar of water to turn it a light tan. Place a gelatin "cell" in each jar of water. Let them stand overnight. The gelatin solution in the jar with the iodine will turn a light blue; there will be no change in the other.

The iodine must have reached the inside of the bag. Therefore, it must have passed through the membrane. The water outside the membrane did not turn blue; therefore, starch could not pass through the membrane.

Help the pupils to discover what calcium does in bones. Materials needed are, clean chicken bones, vinegar or diluted hydrochloric acid, and wide-mouth jars.

- . What did the vinegar (acid) remove from the bones?
- . What does the calcium do for bones?
- . Why didn't the entire bone dissolve?
- . Do bones contain protein? Can vinegar dissolve protein? Try it with a protein food.
- . Is there more than one kind of cell in bone?

68. Pupils can do this project at home, bringing in their chicken bones when they think that they have changed.

- . Who needs the most calcium, children or adults? Why?
- . Who needs the least calcium?
- . What are some rich sources of calcium? of vitamin D?

69. Have each pupil check a box of salt at home.

- . Does it say "iodized" on the label?
- . What is the purpose of iodine?
- . What kind of nutrient is iodine?

70. Make a tally of how many pupils use iodized salt at home and how many do not.

- . Besides iodized salt, what other foods contain iodine?

71. Invite a dentist to class to discuss with the pupils the importance of good nutrition to dental health. Have the dentist include a discussion of fluoride and how it helps to prevent dental caries.

72. Have pupils bring labels or boxes from bread and cereal products. From these find out the names of the B. vitamins.

- . Are other nutrients listed?

Note: If the hydrochloric acid is used instead of vinegar, special techniques will have to be used; e.g., handling the bones with tongs.

After a few days, the bones will become pliable and will bend easily.

The acid (vinegar) has dissolved the calcium. Explain that vinegar we eat, as in salad dressing, does not have this same effect on the bones in our body since they do not soak in what we eat.

Iodine is a mineral that we need in trace amounts. A lack of iodine in the diet can result in goiter. Iodine is necessary for proper functioning of the thyroid gland.

It may also be of interest to compare the price of iodized and noniodized salt.

Obtain the poster "Have a Happy, Healthy Smile" from the office of the Dairy Council. (See the New York State curriculum guide for dental and oral health.) For more detailed dental health information contact the office of the Dairy Council, or the County Unit of the American Dental Association.

Obtain from the office of the Dairy Council a copy of "The Great Vitamin Mystery." This booklet is the story of the discovery of each of the major vitamins. It also explains the deficiency diseases that result from the lack of each vitamin.

- . What are they? Are they essential?
- . Can we obtain them from other sources?
- . Why is vitamin B important?

73. Discuss: If there were no citrus fruits available, how would people get their vitamin C?

74. Discuss:

- . Do children in New York State need vitamin D in their milk more than children in a tropical country?
- . Who might need to consume foods containing vitamin D more than children in New York State?
- . Do you think that living habits or type of clothing one wears could make a difference in one's need for consuming foods containing vitamin D?
- . What are some rich sources of vitamin D?

Read to the class "The Case of the Pine Needle Soup." "The Great Vitamin Mystery," pp. 18-22. (Available from the office of the Dairy Council.)

See pp. 22-25 of "The Great Vitamin Mystery."

Since exposure to the sun's rays stimulate the body to produce vitamin D, children living in geographic areas where the sun is likely to shine less will need to consume foods containing vitamin D. Alaska would be an example of such an area.

Vitamin D fortified milk is an excellent source of vitamin D as well as calcium and other nutrients.

SUB-TOPIC: Water Is Essential

ENABLING OBJECTIVE: The learner is able to explain the purpose of water in the body.

LEARNER ACTIVITIES

75. Have a committee of pupils research the answers to these questions and report their findings to the class.
- . How much of the human body is water?
 - . How is water important to cells and tissues of the body?
 - . What is the function of water in the body?
 - . Where do we get water? Do foods contain water?
76. Discuss the evidence that foods contain water. Ask the class whether there are ways to prove that foods contain water.
- . Compare the amounts of water in various foods.

TEACHER INFORMATION

Most elementary school health text series can be used for this research. Approximately 80 percent of the human body is water. Water is necessary for dissolving chemicals in the body, for digestion of foods, for carrying food and oxygen to the cells, for building protoplasm, and for removal wastes. Water is necessary for all of life's processes.

The pupils have seen evidence that foods contain water. For example, they have seen some foods being squeezed for juice, they may relate the water seen in a pan after spinach is cooked, or the drying out of uncovered bread.

This can be done by weighing a food; a spinach or lettuce leaf works well, and then placing the food in a warm place for a few days (or an oven for a shorter period of time). Then weigh the food again. The difference in weight is due to water loss. The water evaporated.

To compare the amount of water in different foods, repeat the experiment using equal weights of several moist foods, e.g., fruits and vegetables, and some dry foods, e.g., rice or macaroni.

An excellent resource is "Nutritive Value of Foods," (Home and Garden Bulletin No. 72), United States Department of Agriculture, Washington, D.C.

SUB-TOPIC: Source of Nutrients

ENABLING OBJECTIVE: The learner is able to explain why food can provide all the nutrients people need.

LEARNER ACTIVITIES

77. Have the pupils make a list of a variety of milk products.

- . Do you think that boys and girls in Mexico eat the same foods that you do?
- . What might they eat?
- . Can they eat all the kinds of foods they need without having any of the foods you ate today?

78. From the label on a bottle of vitamin pills, list on the chalkboard the contents (ingredients) of the pills.

79. Discuss the following:

- . Can you think of nutrients that we need but are not in the vitamin pills?
- . Is there anything in the vitamin pills that we can't get from food?
- . If we get enough vitamins from foods we eat, do we need more?
- . What happens to the extra vitamins if we already get enough from food and we take a vitamin pill?

TEACHER INFORMATION

Milk provides energy because of the fat and sugar content; it is a rich source of protein; and it has calcium, vitamin D and other minerals and vitamins.

A typical menu for Mexican children might be:

Chicken and/or beans	Peppers
Tortillas (bread)	Potatoes
Tomatoes	Cheese
Coffee with plenty of milk.	

Discuss typical menus for other nations.

Vitamin preparations are freely advertised through the media. It is important that the learners begin to analyze these advertisements in terms of scientific facts and their application to good nutrition.

Possible responses would be energy-producing nutrients (fats and carbohydrates), and protein. Some vitamin pills contain iron but many do not.

The obvious answer is "no," but it might be helpful for greater understanding to discuss the concept that foods may also contain other nutrients that are still unknown. Depending on vitamin pills could result in deficiencies. Excessive quantities of vitamins do us no good.

Extra quantities of the water soluble vitamins are excreted in the urine. Fat soluble vitamins are stored.

. Is it possible to take too many vitamin pills?

. When should we take vitamin pills?

Debate: If we could get all the nutrients we needed from a pill (which we cannot) do you think that people would stop eating food and start taking pills instead?

. What impact would a nutrient industry making only pills have on the nation's economy? (Assuming people would take pills instead of eating food)

. List several occasions or events where food is a central attraction.

. Is there a pattern of the kinds of foods served on these special occasions?

Excessive amounts of vitamins A and D over a period of time can result in hypervitaminosis.

Vitamin supplements are generally not needed and should be taken only when prescribed by a physician.

Bring into the debate ideas related to foods associated with social events, religion, etc., and the pleasure foods can provide sensually, psychologically and socially.

What Is Good For Me?

Some foods are better for you than others. How about the food that you eat? Let's look at that food.

In Objective 1 you made a list of the foods you ate for one week. Look at that list.

On the check list below write down the food you ate for one breakfast, one lunch, and one supper. Now rate what you ate on the following scale:

- 5 = Excellent, Nutritious food--No preservatives or artificial chemicals
- 4 = Good Food--Mostly natural but has chemical preservatives
- 3 = Not healthy, but not unhealthy
- 2 = Mostly artificial chemicals and preservatives
- 1 = All junk

Look at your ratings. Is the food you eat healthy?

___ The Doofus Stories

WHAT I ATE ONE DAY

HOW I RATE THIS FOOD

BREAKFAST

LUNCH

SUPPER

FOODS WE EAT AT HOME

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
4. Students will identify foods that are eaten for breakfast, lunch, dinner, snacks, various celebrations and holidays and be able to discuss the importance of eating a balanced diet.	1. Ask the students to bring to class wrappers or labels from foods which they eat at home for breakfast. Use those labels to develop the Learner Activities 41-47. (K-6)	1. Nutrition Education (K-3) pp. 31-35
	2. Ask the students to take a poll among their classmates about their favorite lunch foods. Use the results of that poll to lead into Activity 46, "What Is the Importance of Eating a Good Lunch?" (K-6)	2. Nutrition Education (K-3) p. 41
	3. Instruct the students to follow the directions on the worksheet "Food Groups At Home." They will use this worksheet to construct two dinner menus. (3-6)	3. The Doofus Stories p. 163
	4. Provide Students with a list of traditional holidays (Thanksgiving, Rosh Hashanah, Quansa, etc.). List under each holiday those foods which are associated with the specific holiday. Use this as a lead in for "What Special Events Is Food a Part Of." (Learner Activities 56-57) (K-6)	5. Nutrition Education (K-3) p. 41

SUB-TOPIC: What is the importance of eating a good breakfast?

ENABLING OBJECTIVE: The learner is able to describe why it is especially important to eat an adequate breakfast.

LEARNER ACTIVITIES

40. Have the pupils figure out how many hours pass between the last food eaten in the evening and breakfast the next morning.
 - . Does the body require energy during sleep? Explain.
 - . Is there any energy food left for the morning's activities?
 - . How can we be sure that we have the energy needed for the morning's activities?
 - . Why is it important to eat something in the morning?
41. Make a list on the chalkboard of foods that are good to eat in the morning.
42. Have the class develop some unusual breakfast menus that do not contain the traditional foods for breakfast, e.g., toast, eggs, bacon...
43. Have the pupils tell or draw pictures of what they like to eat in the morning. Each pupil should label each food item. Are there any unusual foods listed?
44. Have each pupil keep a record for a week of what they eat in the morning.
 - . How many different kinds of traditional breakfast foods have been eaten by the pupils?

TEACHER INFORMATION

It is especially important to emphasize the need for eating in the morning to provide the energy needed for the morning's activities. The Child Nutrition Act of 1966 provided Federal Funds for a pilot school breakfast program for children in areas of need and for those who travel long distances to school. Such programs can provide an opportunity for teaching the importance of food intake in the morning.

You may want to introduce the idea of basal metabolism as it relates to energy expenditure.

Foods that are usually eaten at other meals are alright to eat for breakfast. For example, a hamburger or peanut butter sandwich along with fruit or juice can form the basis for a nutritious breakfast.

These activities may be conducted in relation to art and language arts.

List the foods on the chalkboard.

Evaluate with the class the kinds of foods they eat in the morning.

One of the chief concepts that should be developed is that there are many different kinds of foods that are good to eat in the morning.

- . What is a traditional breakfast food?
- . How did these foods become known as breakfast foods?
- . Do some pupils eat foods that are not usually thought of as breakfast foods? What are they?

The County Cooperative Extension has a Your Project entitled "Food In the Morning." It contains a teachers' guide and activities sheets.

Obtain from the office of the Dairy Council copies of What Did You Have for Breakfast This Morning?

- . a poster which shows children from different countries and ethnic groups. It is intended to help children recognize that food habits can be different but still healthful.
- . an activity piece for individual pupil use. It reproduces the poster and provides space for menus.
- . a teacher's guide that describes the food habits in the countries of the children pictured on the poster.

45. Have the children participate in making a bulletin board or other display on the subject "Food in the Morning." Perhaps the display could be used at a PTA meeting, open house or other school/community function.

Vocabulary:

activity
breakfast
ethnic
habit
hamburger

menu
nutritious
peanut butter
record
sleep
toast

SUB-TOPIC: What is the importance
of eating a good lunch.

ENABLING OBJECTIVE: The learner is able to state the value of a good lunch.

LEARNER ACTIVITIES

46. Discuss with the pupils their favorite foods for:

- . lunch
- . dinner or supper
- . snacks

Make a list on the chalkboard.

- . Why are these favorite foods?
- . Are they nutritious?
- . Check those that are energy foods.
- . How often do the pupils eat their favorite food?
- . Does your school have a school lunch program?

TEACHER INFORMATION

Although eating a good breakfast is important, people also need to eat several times a day.

Obtain the poster, "Join Us for Lunch" from the office of the Dairy Council. It depicts children in a school cafeteria line. The poster is intended to help to develop positive attitudes toward the school lunch and to encourage good lunch eating practices.

If many of your pupils bring their lunches to school, observe and compare the foods eaten with those available through the school lunch program.

If many of your pupils go home for lunch, observe the practices that may interfere with eating an adequate lunch. For example, do some pupils stop at a store to buy candy on the way home? Do some children bring snacks to school that they eat on the way home (or possible during the morning)?

47. Study the school lunch menus for the week ahead.

- . Do the menus comply with the requirements for a type A lunch?
- . Is an ala carte menu provided? Is it nutritious?
- . Does the week's menus provide for variety from day to day?
- . How many favorite foods, as listed earlier, are on the menus?
- . How many pupils bring their lunch? What do they generally bring? Are the lunches nutritious?

It will be helpful to establish some criteria as a guide to determine what constitutes a nutritious meal. For example, some ala carte dishes may be nutritious but inadequate if eaten alone.

It is important to place lunches in context with the other meals and snacks that the pupils eat during the entire day.

Vocabulary:

ala carte	lunch
cafeteria	menus
candy	school
dinner	snack
eating	supper

41. Food Groups at Home

Look at the foods in your cupboards and refrigerator at home. Make a list of foods in each of the Four Food Groups:

Bread and Cereal Group

Fruit and Vegetable Group

Meat and Beans Group

Milk Group

SUB-TOPIC: What special events is food a part of?

ENABLING OBJECTIVE: The learner is able to list situations where food is used as an important part of the occasion.

LEARNER ACTIVITIES

55. Have a birthday party for all the children whose birthdays fall within a certain month. Use an entirely different approach. Instead of the usual cake and ice cream, serve new foods such as carrot cake, cottage cheese, ice cream, squash pie, etc. Have the children help to plan the party.

- . Can we have a birthday party without cake and ice cream?
- . How would the party be different?
- . What other foods can we associate with certain events? (Turkey, ham, fruit and nuts, etc.)

56. Discuss holidays in which food has a traditional place. Make a bulletin board display of foods for these holidays.

57. Discuss: Mealtime is a time for the family to be together.

- . Why can it be important for the family to eat together sometimes?
- . Besides the kind of foods being served, what else can make mealtime pleasant?

TEACHER INFORMATION

Food is part of many happy situations (weddings, birthdays, holidays) that give us pleasure.

Read to the class the tea party sequence from Alice In Wonderland.

Vocabulary:

appearance	holiday
birthday	ice cream
cake	mealtime
dinner	snack
family	pleasure

FOODS WE EAT AT HOME

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
5. Students will construct a master shopping list for those items which are most frequently purchased for family meal preparation.	1. Follow the directions in the worksheet "Snacks for Sale" as an initial step in constructing a master shopping list. (K-3)	1. "Be A Choosy Chewer" Card #21
	2. Use "Learner Activities" 50-63 to illustrate how advertisements affect the family food selection and budget. (3-6)	2. Nutrition Education (K-3) pp. 45-47
	3. Use the information contained in "Supermarket Search" to assist students in developing a shopping list that contains additive-free foods. (4-6)	3. The Doofus Stories pp. 111-115
	4. Have students evaluate a series of food products using the information provided in "What Is the Message." (3-6)	
	5. Using "Brands for Sale" have students categorize by product and brand those items most frequently purchased for home use. (K-3)	5. The Food Peddlers Card #20
	6. Use "Buy My Brand" to illustrate different sales techniques and to highlight why some people always buy the same brand of food. (3-6)	
	7. "TV Time" may be used as a homework assignment.	7. The Food Peddlers Card #22
	8. Use "My Shopping List" as an evaluation tool for the above activities. (2-6)	8. The Food Peddlers Card #23

Snacks for Sale

Grandma says:

I have a puzzle. What would Puddles try for a snack? To find out, let's make a snack store and help him be a "choosy chewer."

Divide up into four work teams.

Team 1 The Winning Oranges can start a wall mural of a Magic Cupboard Snack Store.

What foods can you put on the shelves of this store?

Think up good snacks with special names.

Draw the shelves on a big piece of paper, as high as a door. Block off one-foot (12-inch) squares. Draw, color, and name the snacks. Write the name of the store in big letters across the top.

Team 2 The Super Broccolis can make a snack stand.

Take a big box and cut an opening for a window. Or use a table and cover the front and the sides, down to the floor, with paper. Decorate the stand with pictures of good foods and happy faces. Place the store in front of the wall mural when Team 1 is finished.

Team 3 The Crunchy Carrots can stock the store with items to sell! Here's a choice:

Choice 1. You can make the snack of the week and sell it to your classmates at the snack stand. What about --

carrot and green pepper sticks

granola

honey milk balls

witch's brew

You will need certain supplies.

Cooks should have clean hands and divide the jobs.

___ Be A Choosy Chewer

Choice 2. Collect or make snack "props" to sell. Wash out empty half-pint cartons. Bring in empty food cartons or boxes. Cut out pictures of good food snacks from a magazine and mount them on cardboard. Make a sales list of snack foods to sell for 5¢, 10¢, 25¢ or 50¢. Make paper money to use in your store.

Team 4 The Happy Bananas can make chef hats and Grandma aprons for use in the store (ask your teacher for the patterns). You can also make a big newspaper ad announcing the Magic Cupboard Snack Store.

Now you are ready to practice buying snacks and making change.

Take turns.

You also practice choices when you go out to eat.

TOPIC: Food Advertisement

SUB-TOPIC: What is advertisement?

TERMINAL OBJECTIVE: To understand the purpose and influence of food advertisements.

ENABLING OBJECTIVE: The learner is able to define food advertisement.

LEARNER ACTIVITIES

60. Have the pupils collect a variety of food advertisements from newspapers and magazines. Place the advertisements into three groups: (1) announcements, (2) announcements that persuade, and (3) chiefly persuasive.

. How many of the food ads are simply announcements?

. What do some of the ads do that tend to make a person want to buy the product?

61. Have each pupil write a paragraph about what they think an advertisement is.

TEACHER INFORMATION

Advertisements may take a variety of forms, such as an announcement that makes people aware of a product or event, an attempt to persuade people to buy a product, or announcement that contains a high degree of persuasion.

The school cafeteria menu is simply an announcement to the pupils about what foods the cafeteria is serving each day. Many supermarkets announce bargain products. These advertisements are intended to persuade buyers to purchase foods and household products from their store rather than their competitors by offering a reduced price. Many advertisements on television are chiefly persuasive in that they attempt to persuade people to want their product. "Help Wanted" ads may be merely announcements or they may attempt to make the job vacancy attractive.

____ Nutrition Education

SUB-TOPIC: Why are advertisements used?

ENABLING OBJECTIVE: The learner is able to describe some techniques used by advertisers to persuade us to buy their products.

LEARNER ACTIVITIES

62. Have some pupils make a list of the products advertised during television programs that are intended for children.

- . How many of the advertisements are for food or food-related products?
- . How many of these are chiefly "empty" calorie foods?
- . What do the advertisements contain or do that makes you want to buy the product?
- . Are there any persuasive advertisements for nutritious foods?
- . What other kinds of products are advertised besides food-related ones?

TEACHER INFORMATION

Most Saturday morning television programs are intended for viewing by children. The products advertised are those that are generally produced with children as the market.

SUB-TOPIC: How does the media
affect our food choices?

ENABLING OBJECTIVE: The learner is able to cite instances of how food
advertisements have changed his/her food choices.

LEARNER ACTIVITIES

63. Have the pupils make a list of new foods they have tried since the beginning of school.
- . What circumstances surrounded the pupils' reason for trying the food?
 - . How many of the foods were tried because of the persuasion of an advertisement?
 - . What was there about the ad that made the food attractive?
 - . Was the food as good as the advertisement made you believe it would be?

TEACHER INFORMATION

These may be listed on the chalkboard so that the whole class can become aware of how many different foods the class has tried.

Many of the foods may have been introduced to the pupil by their friends, parents or other relatives, at a special occasion or because of an advertisement.

Vocabulary:

advertisement
attractive
buyer
consumer
empty calorie
magazine

market
newspaper
persuade
produce
supermarket

SUPERMARKET SEARCH

Specific Concepts/Skills:

Food Choices

1. Food choices are affected by: packaging; advertising; appearance; taste; cost; ethnic, family, and peer influences; and nutritional information.
2. TV commercials and food packaging/display gimmicks may induce children to buy a variety of products, some of which are foods that are not nutritionally sound. Nutritious, fresh foods are rarely advertised on TV.

Food Processing

3. Any food that is changed from its natural state before it reaches the supermarket is called a process food. These changes might occur while the food is harvested, manufactured, packaged, stored, or prepared for consumption. Thus, processing includes foods that are frozen, canned, dried, or mixed with other foods or additives.
4. Processing takes place for a variety of reasons. These include: safe storage, added bulk, changed appearance, enhanced flavor, ease of handling, year-round availability, or restoration of some of the food value lost in prior processing.
5. Food processing may affect nutrient content or add extra ingredients like sugar and salt. In some cases, (e.g., fresh fruits and vegetables in season) it may be preferable to eat unprocessed foods because of the taste, the bulk (fiber) of the food, and the absence of artificial flavoring and other additives.

Food Labeling

6. Reading the labels on food packages is helpful in identifying all the ingredients inside. The items on the label are listed in order of decreasing percentage of the total weight of the food.
7. Sugar and other sweeteners are listed by a variety of names on labels.

The Bread and Cereal Group

8. There is a large variety of breads and cereals.
9. Flour that makes bread comes from grass plants called grains. In addition to the most common grain source--wheat--breads here and in other countries can be made from corn, rye, oats, rice, millet, barley, and other grains.

___ The Doofus Stories

SUPERMARKET SEARCH (continued)

10. When wheat is milled into white flour to make white bread, some of the vitamins and minerals are lost. They are later partially replaced when the flour is "enriched". Whole wheat bread contains flour that has not lost the vitamins and minerals in milling. It also contains the fiber and fat from the original grain kernel.
11. Bread and other products made from whole wheat or enriched flour contain significant amounts of the B vitamins.

The Meat and Beans Group

12. Protein foods from animals include fish, poultry, meat, seafood, and milk products.

Protein foods from plants include nuts, seeds, dried beans and peas (legumes), and grains.

13. Meat comes from a variety of animals: cows (beef and veal), pigs (pork, bacon, ham and sausages), and sheep (lamb). Poultry includes chicken and turkey.
14. Fish and poultry contain less fat than beef. Fats give twice the amount of food energy (calories) per weight as protein or carbohydrates.
15. Proteins obtained from meat or milk foods (animal sources) are complete proteins which help us grow. Proteins from plant sources like seeds and legumes are incomplete proteins that can be correctly matched with other plant or animal foods in order to give us the protein we need for growth.

Proper Protein Matches:
 legumes and grains
 legumes and seeds
 grains and milk foods

New Vocabulary:

Cereal Aisle	- diet package	supermarket cereal	advertise	advertisement		
Fresh, Frozen	- fresh juice	frozen produce	can(ned) cider	bottle(d) jug	dried bin	sauce
Bread	- food label - rye	bagel oats	loaf corn	stack enrich	wheat	grain
Protein Game	- meat	fat	protein			

SUPERMARKET SEARCH (continued)

Activities:

1. Children watch TV commercials (especially Saturday morning) and count, in one day, the number of food commercials, kinds of foods advertised, and the media techniques used to sell these products. Use the work sheets to tally the results.
2. Class discuss ads - do they offer giveaways?
 - are children used in commercials?
 - are junk (sugary) or healthy foods advertised?
 - do the ads tell you you'll grow better, faster, happier, or more popular if you use their product?
 - did the ad make you want to buy it?
 - did you ever buy some food because of an ad and then not like it?
3. Show film "Seeing Through Commercials." Students make up and act out own commercials for healthy foods.
4. Visit supermarket with class for a "behind the scenes" tour.
 - Find tomatoes in as many different forms as you can.
 - What foods are at your eye level? Which are at ends of aisle or at checkout?
 - Which foods offer prizes or other gimmicks? Which packages do you like best?
 - Where are the nutritious foods displayed? (dairy, produce, legumes (peas/beans), meat, fish, bread, cereal)
 - How much space for nutritious vs. junk foods? Count the rows or shelves.
 - Survey Dairy products, Fruits and Vegetables, Meats and Beans, and Bread and Cereal foods.
 - Compare supermarket smells in the different sections.
5. Visit an ethnic market and compare to supermarket - different smell, new kinds of foods.
6. Save food package labels and make label scrapbook, or include as one section of a larger scrapbook on health or fitness.
7. Check foods for sugar content. Read labels to see where listed in ingredients. (Ingredients are listed in order of amounts.) Emphasize that there are different types of sugar. Bring in corn syrup, molasses, a piece of fruit, and other items that are different types of sugar.
8. Set up a mini-market in class. Organize shelves according to some scheme - i.e., nutrients, plant or animal origin, etc.
9. Bake bread

SUPERMARKET SEARCH (continued)

Activities:

10. Explore protein foods. Discuss complementary proteins.
11. Make peanut butter.
12. Explore cereals.
13. In the kitchen, pantry, or supermarket, copy 10 words you can recognize on packages or take 15 minutes to collect as many words as you can read.
14. Explore the effect of preservatives on food, how foods spoil: Take four slices of bread (could do two sets - one set home-made bread without preservatives - one set with), and let dry.

Treat bread differently - put one slice each:

- a) in plastic bag in warm, dark place
- b) in plastic bag in cold, dark place
- c) in plastic bag with water and in warm, dark place
- d) in plastic bag with water and in cold, dark place

Leave bread slices in different environment for one week, then compare.

15. Bring in kernels of wheat - and puffed wheat. Soak the puffed wheat until the outside skin comes off. Discuss how milling changes wheat, the differences between whole wheat and white flour, and the reasons for enriched flour.
16. Tell stories about food origins. See Folklore and Odysseys of Food and Medicinal Plants, and other resources in the Learning for Life Library.
17. Children and teacher imagine they're allergic to white sugar. Try spending a day eating foods without white sugar.
18. Plan field trips for the class, or suggest possible family outings. Discuss how food is grown and distributed, pricing, the jobs related to the food industry, countries and states of food origin, etc.)

Note: Complementary proteins--A means of eating foods to assure that one's diet contains all the essential amino acids needed by the body to support growth. For example, the consumption of beans and rice together provides a high quality protein meal. The same kind of complementary effect occurs when one pours milk over cereal or eats cheese with bread.

WHAT IS THE MESSAGE?

OBJECTIVE: The children will analyze the advertising messages directed at them on TV, in magazines, on trucks, in the supermarket, etc.

MATERIALS: TV Children's magazines
Food labels Delivery trucks
 Trip to supermarket

- PROCEDURE:
1. Have the children watch TV on Saturday morning and after school.
Ask them to observe the TV food commercials carefully.
Ask the children to count how many advertisements they see or hear on food from delivery trucks, billboards, books, radio, TV, etc. in one day.
 2. Have the children act out the commercials. If products are available, use them.
 3. What is the overriding message?
Remember all advertising appeals are not verbalized.
 4. What claims are being made?
Is a premium or membership a condition of purchase?
Is a leading sports personality, news personality, entertainer or any familiar character used in the commercial?
Are children used as spokespersons or employed to deliver the sales message?
Are vitamins advertised?
Are empty calorie products, or products debased by excessive amounts of sugar, saturated fat and potentially harmful food additives advertised?
Is a synthetic food advertised in such a way as to imply that it is comparable to or made from a natural food, such as an orange "flavored" drink advertised as orange juice?
Are claims made directly or by implication that any edible product or nutrient by itself produces, hastens or enhances vigor, stamina, strength, energy, growth, intellectual performance?
 5. Can these claims be supported by facts?
Are these foods protective to health or potentially harmful to health?
Bring in labels of the products and read the ingredients.
If ingredients are not listed, write the manufacturer to find out what they are.
 6. What type of food habits are being promoted?
 7. What food industries promote products consistent with good food habits?
What food companies promote foods that may undermine health?

8. What values are the commercials emphasizing?
Are they emphasizing positive values that should be reinforced
or values that may be personally or societally destructive?
9. Have the children work out and dramatize their own commercials
for wholesome foods.

TEACHER'S NOTE:

A tape or video tape of commercial would be useful.
Older children may write to the FTC (Federal Trade Commission)
and express their views on the commercials.

Let the food manufacturers know what the students think about
their products and advertising.

The advertising budget for junk foods is billions of dollars
annually. In fiscal year 1972, the advertising budget for
Coca Cola Company was \$69 million while the entire Food
Drug Administration Bureau Foods budget for fiscal year
1972 was \$48.3 million.

For further information on advertising budgets of the food
industry, see The Foodmakers by Michael Jacobson, Center for
Science In The Public Interest, Washington, D.C.

Creative Food Experiences for Children, Center for Science in the Public
Interest, Washington, D.C. 1974.

Brand for Sale!

- What's in a name? Ask the children. "Why do you have different names?" Call out one child's name. "How many of you are this person? Why? What does a name do for you? Explain that a name helps to identify a particular person, making him or her distinctive.

- Just as the children have different names, many types of food products have different names. They are called "brand names."

- Ask the children, "What is a brand? Do you know what a branding iron is? Why does a rancher use it?" Explain that the brand is a mark that identifies the owner.

brand - a mark or label that identifies something.

- Identify brands. Ask the children to bring in wrappers or boxes from food wrappers or boxes from food products. Look at the food wrappers or boxes and find the brand names? What types of products do they find?
- Play a game. Name a type of product and ask the children to name as many brand names as they can think of for it. Write the brands on the board and tally them. Save the results.

Example:	product	soda pop
	brand names	Coke, Pepsi, 7-Up, Dr. Pepper, Tab, Squirt, Fresca, etc.

Try other products--cereals, milk, orange juice, candy. For which kinds of products can the children name the most brands? Are they nutritious foods?

- Have the children take home the activity "TV Time" and do it while watching TV. Have them bring back the completed activity sheets and discuss in class. Did they identify the brand names and products correctly? Could they identify the ads?

Children who don't have a TV can use magazines and newspapers to do this activity.

___ Food Peddlers

Buy My Brand!

- . Ask the children, "Why are there so many brands of the same kind of product?" For example, isn't soda, pop, soda pop? What makes one soda pop different from another? Does the advertiser usually try to sell a type of product or a brand of product? Soda pop or Coke? Why?

Note: The advertiser usually tries to sell a brand. However, public service announcements and ads by trade associations, such as the American Dairy Association, usually push a type of product.

- . Try this. Divide the class into two groups. Tell each group to try to sell you soda pop. Pretend to be the buyer and ask the children in each group, "Why should I buy soda pop from you when I can get soda pop from the other group? What makes your soda pop better?"

- What could they do to make their product different or seem different to the buyer? The answer is to use a brand name. The advertisers want you to buy their brand of soda, not someone else's. They want to sell more and make a profit. This is the basis of competition.

- . Ask the children, "What is competition?" To demonstrate the idea, set up a class relay. Which team won the competition?

competition - a contest or match, especially in business.

- . Do a "brand investigation." Do brands really differ? Sometimes they do, and sometimes they don't. To investigate, bring in two different brands of orange juice or cola. Have the children put on blindfolds and taste each one. How many can tell which brand is which?

Expansion idea!

Why not set up weekly competitions within your class? Let the children choose the activities.

TV Time!

Name _____

Here is a fun thing to do the next time you watch TV. Write down on the chart below every ad you see. Write down the type of product and the "brand name."

Type of Product	"Brand Name"	Type of Product	"Brand Name"

Write the times two or three different ways.

Example:

1. 7:45
2. 45 minutes past 7 o'clock
3. quarter to eight

Began

1. _____
2. _____
3. _____

Finished

1. _____
2. _____
3. _____

How long did you watch TV? _____ hours _____ minutes _____

____ Food Peddlers

My Shopping List

The students have listed what they eat at home for one week. Now it is time for them to prepare a shopping list so that they will know what to buy when they go to the supermarket.

Have each student prepare a list and discuss them in terms of what they need to prepare the week's meals as well as the nutritional impact of the food they will buy.

___ Food Peddlers

FOODS WE EAT AT HOME

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
6. Students will use their personal master shopping list to develop comparison shopping skills.	1. Take your class on field trip to the supermarket. Have one group fill out the information on the "Supermarket Search" worksheet. Have the second group complete the information on "What's On A Package." The two groups will report our their findings in the form of a newsletter. (2-6)	1. The Doofus Stories pp. 139-140
	2. Prepare to take your class to a market such as the Delancy Street City Market. Use "To Market, To Market, In Search of Good Food" to prepare for the trip.	2. Nutrition Education (3-6) p. 154-156
	3. Use "A Supermarket Investigation" for a homework assignment. You may also use "My Choice." (2-4)	3. The Food Peddlers Cards K and Y
	4. Have the students use their master shopping list to solve the mysteries in the "Supermarket Detective." (4-6)	4. Nutrition Education Resource Pack
	5. Use the "Comparison Checklist" to determine mastery of this objective.	

32. Supermarket Search--Foods

1. Try to find tomatoes in as many different ways as you can. They can come in bottles or cans, fresh or frozen. Make a list here.

2. Ask the grocer where the fresh tomatoes came from.

3. List 10 foods that are on shelves as high as your eyes.

4. Name some foods that offer prizes or send-away offers.

___ The Doofus Stories

34. What's On a Package?

Choose a packaged or canned food.

Look carefully on your product for the following information:

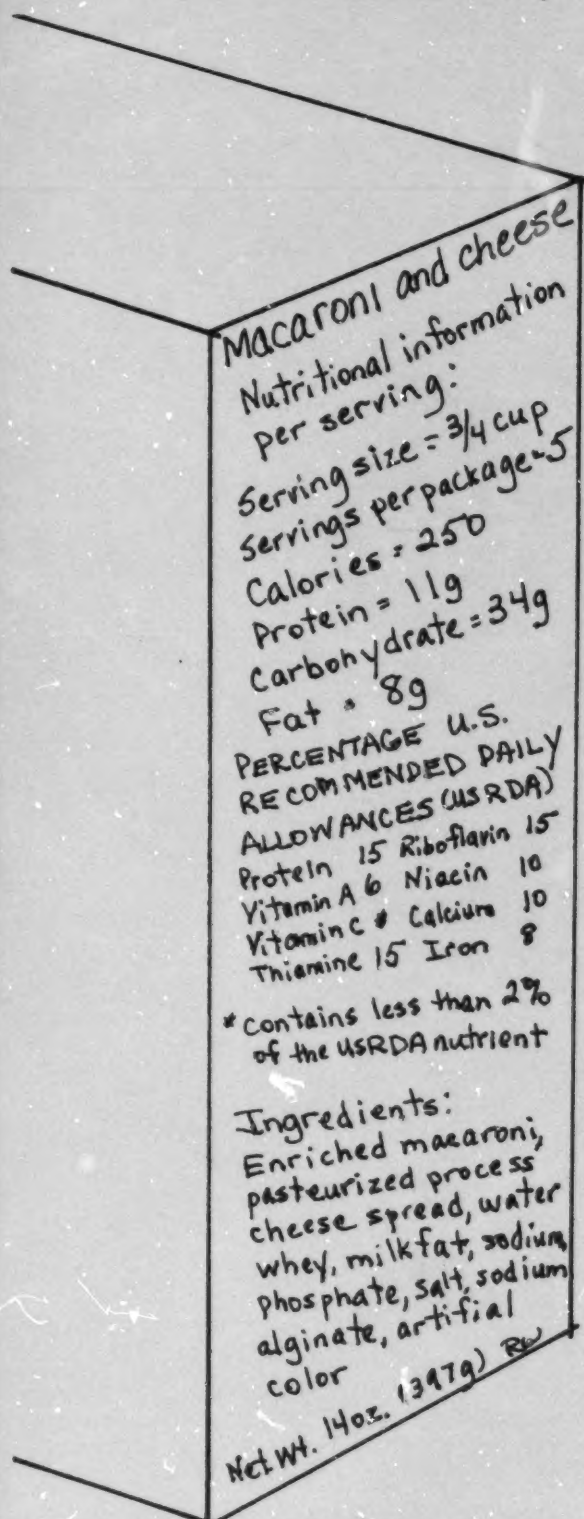
Brand name:

Ingredients:

Weight:

Draw what your product looks like.

Labels That Feed You a Story



Nutrition Education

Food labels can help you choose a diet that gives you the nutrients you need. They can't do the whole job, though, since many nutritious foods like fresh fruits and vegetables, fish, poultry, and eggs are not required by law to have labels.

Nutrition information is carried on the labels of many foods. This information is not required unless the food makes a nutritional claim like "low calorie," or has been enriched (had nutrients added). The nutrition labels, like the chili label on this page, will tell you the number of Calories per serving and the amounts of protein, carbohydrate, and fat. They also tell you how much of the recommended amount of eight nutrients the food contains. The percentage (%) of the Recommended Daily Allowance (called the U.S. RDA's) is only a general guide, not a perfect system for choosing food. Take a look around your kitchen. How many of the foods on your shelves have nutrition labels?

CHILI CON CARNE

Nutrition information per serving:

serving size = 1 cup
serving per container = 2
calories 370 protein 18g.
carbohydrate 24g. fat 22 G.

PERCENTAGE U.S.
RECOMMENDED DAILY
ALLOWANCES (U.S. RDA):

Protein	25	Thiamine	2
Vitamin A	50	Riboflavin	6
Vitamin C	4	Niacin	6
Calcium	6	Iron	15

Ingredients: water, beef, red beans, tomato past, chili powder, garlic powder, spices, paprika, salt, artificial flavoring.

Net wt. 15 oz. (420 grams)

TO MARKET, TO MARKET, IN SEARCH OF GOOD FOOD

OBJECTIVE: The children will go to market to investigate the variety, quality and quantity of nutritious foods available.

MATERIALS: Supermarket

- PROCEDURE:**
1. The supermarket can be a living museum for the creative teacher.
For each food category studied, you may find that a trip to the supermarket, a natural food store, an ethnic food store or a country market would greatly enhance the children's knowledge of food. Today, many children shop for food.
Supermarket field trips should focus on how to select good food buys.
Older children may find unit pricing, open dating and nutrition labeling of interest.
Ask for the supermarket's consumer specialist to give you a tour.
 2. Prepare for the field trip. Discuss with the children:
How much space is allotted to wholesome foods, to junk foods, to non-food products?
Are some foods or food products manufactured primarily for good nutrition while others are manufactured primarily for profit? Do some food companies market wholesome food and other companies market junk foods?
Check brand names and see.
What kind of food displays are at the end of the aisles, near the door, check-out counters and at other conspicuous places at the eye level of children. What is their purpose?
Which foods do parents buy on the request or demand of their children? Why do children want these foods?
Which foods offer prizes or other gimmicks?
Which foods are packages to tempt children?
Set up a supermarket in the classroom. Have the children bring empty containers from home. Perhaps the food service in the school could provide some assistance.
 3. Suggestions for supermarket tours.
Overview supermarket:
Have the children identify the areas where the nutritious foods are displayed (dairy, produce, legumes, meat, fish, bread, cereals).
How much space is allotted to nutritious foods; count the rows or shelves. How much to junk foods? Is there a section for non-food items? Outline a floor plan with each section identified.
Overview a natural, ethnic food store or a country market.
Follow the procedures as above. Compare differences in food available, variety, quality and price.

Discuss with the children: Dairy Products

What kinds of milk are available? Whole milk, skim milk, buttermilk, 2% butter-fat milk, chocolate milk, evaporated milk.
What are the kinds of cheese available? Natural, processed.
See what coloring and preservatives are added. Look for the origin. Observe cheese foods and cheese spreads. Read label for content. What fillers and additives are used? Compare cost with natural cheese.
What type of artificial dairy products are displayed?
Creamers, whips, etc.
What forms of dairy products are available? Fresh, canned, dehydrated.
List the best buys.

Discuss with the children: Fruits and Vegetables

What are the differences in the variety, quality and origin of available fruits and vegetables?
Are seasonal ones less expensive in season?
Is color added for cosmetic reasons? Florida oranges may be dyed.
Was the produce picked by unorganized workers or poorly paid migrant workers? Which companies have unions and which ones do not?
The produce is available in what forms? Frozen, fresh, canned, dehydrated.
How has the produce been processed?
How many artificial fruit drinks are displayed? Who manufactures them? What do they contain? Look on the labels for the words methyl cellulose, artificial, imitation, synthetic.

Discuss with the children: Protein Foods

What are the variety, quality, source and origin of legumes, nuts, meats, fish and eggs?
What forms of legumes are displayed? Canned, dried, etc.
Which fish are shell fish? Which are fresh water and which are salt water fish? In what forms are they available? Whole fillets, steaks (raw or cooked), fresh, frozen, canned, dehydrated, smoked.
What different cuts of meat are available? Are they lean or high in fat, fresh, frozen, smoked, cured? Compare the prices of processed meats such as bologna, hot dogs, etc. to other protein foods. Processed meats are probably the poorest in nutritional value and dollar value of the protein foods.
Make a list of the best buys.

Discuss with the children: Bread and Cereal

What are the variety, quality, sources and origin of whole grain, enriched and unenriched cereals and breads?
How much of the whole grain bread or cereal is whole grain?
How much is white? Is color added? Ingredients are listed in order of decreasing amounts. The first ingredient listed is the principle one.
Compare weight and size of loaf. The soft breads may be puffed up with air.

Check the manufacturer of each kind of bread.
Which cereals have sugar, coloring and preservatives added?
Which cereals are junk foods? Which ones are nutritious and are not debased by excessive sugar, saturated fat and potentially harmful food additives.
Which cereals have nutrients added?
Make a list or collage of labels of the best buys.

TEACHERS NOTE:

The following books may be of use in understanding our present food situation and what can be done about it:

The American Food Scandal: Why You Can't Eat Well On What You Earn, William Robbins; Morrow, New York, 1974.

The Supermarket Handbook: Access to Whole Foods, Nikki & David Goldbeck; Harper & Row, New York, 1974.

Hard Tomatoes, Hard Times: A Report on the Agribusiness Accountability Project On The Failure of America's Land Grant College Complex, Jim Hightower; Schenkman Publishing Co., Cambridge, Mass., 1973.

Scoreboard for Better Eating, Michael Jacobson; Center for Science In The Public Interest, Washington, D.C., 1973.

Better Living Through Better Eating, Mary T. Goodwin, Montgomery County Health Department, Rockville, Md., 1974.

The Hidden Persuaders, Vance Packard; McKay Publishers, New York, 1957.

A Supermarket Investigation

Name _____

Write the names of four different food products and their brand names in the first two columns. Put a star by the foods you have seen advertised on TV.

Also, write the names of four foods or products that you think are good for you. Put a star by the ones you have seen advertised on TV. These foods may not have a brand name. Fill in the other columns when you are at the supermarket.

Food or Product	Brand Name	Where in the Store? (aisle, check-out, or other)	Where on the Shelf? (high, medium, or low)
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

____ The Food Peddlers

My Choice!

Name _____

Fill in the chart below. First, list all the foods you have seen advertised that interest you. Will you buy them or ask your parents to buy them? Why or why not?

Advertised food that interests me	Will I buy it? (yes or no)	Why?

Post "Fun and Fitness" Program: Price Comparisons

<u>SUPERMARKET</u>	<u>"FUN AND FITNESS PRODUCT</u>	<u>STORE BRAND</u>	<u>% DIFFERENCE</u>
	Log Cabin Pancake Mix Price--32 oz.	Price--32 oz.	
Key Food	\$1.19	.99	17%
Shopwell	.45	.83	43%
	Honey Price--12 Oz.	Price--12 oz.	
D'Agostino	1.09	.79 Foodtown	28%
		.45 No brand, 24 oz. 89¢	59%
Key Food	1.19	.60 White Rose, 24 oz. \$1.19	50%
Shopwell	1.25	.58 Shopwell, 36 oz \$1.75	54%
	Wonder Bread Price--16 oz.	Price--16 oz.	
D'Agostino	.73	.38 Foodtown, 20 oz. 47¢	48 %
Shopwell	.73	.36 Shopwell, special	52%
	Orange Plus Price--12 oz.	Orange Juice Price 12 oz.	
D'Agostino	1.05	.67 (3 cans \$1.00, 6 oz. each)	36%
Shopwell	1.09	.79	28%

The Supermarket Detective

#1 Set of Clues

Shh: Until now the "Case of the Wise Food-Buyer" has been top-secret. Your class has been chosen to crack the case. Careful investigation using the clues given can help solve the mystery. Search the supermarket high and low. (Be careful not to leave a trace of your search. Put boxes and cans back in their place.) Record all your findings. Good Luck!

No mystery can be solved without imagination and accurate information. Use both in finding answers to this set of clues. If you get stumped on one clue, go on to another and return to the unanswered clue later.

1. The most expensive food: _____
2. The food that traveled the
greatest distance to the store: _____
3. The heaviest food: _____
4. The food that required the
greatest amount of packaging: _____
5. The most inexpensive food: _____
6. The most heavily advertised food: _____
7. A food packaged in a reusable container: _____
8. A food rich in iron: _____
9. The highest priced item per pound: _____
10. A returnable container (not a soft-drink): _____
11. A packaged cereal without sugar: _____
12. A packages cereal with a toy inside: _____
13. A paper product made from recycled paper: _____
14. A packaged food with no preservatives,
additives, enhancers, or artificial flavor: _____
15. Your own clue! _____

NOTES: . Detectives must have keen senses. Sharpen yours.

- . Some vegetables with smooth skin are:
- . Some vegetables with rough skin are:
- . The most fragrant fruit is:
- . A sound I hear is:

#2 Set of Clues

Find the size, price and quantity for a specific soap or cereal product line.

Does the bigger box of soap or cereal really mean more for your money?

Name of Product:

Large

total weight or volume

price

price*

King Size

total weight or volume

price

price*

Giant

total weight or volume

price

price*

*Divide the price for each item by the quantity in the item (i.e., a 20 ounce bottle of liquid soap marked at \$1.00 means that you pay 5¢ for each ounce you purchased. That's the unit price.)

#3 Set of Clues

Compare the price of a frozen food product with its equivalent in canned and fresh forms.

#4 Sweet Clue

Jot down some different kinds of candies, their size and price. Be sure to include caramels, chocolate, and fudge.

#5 Challenge!

Detectives must often rely upon their mathematical skills to figure out a particularly difficult problem. To help solve this mystery, make up a math story problem about shopping in a grocery store. Make it challenging enough to test your own mathematical skills, as well as those of other detectives.

Comparison Checklist

Have each student choose five items from his or her shopping list.

For each item, complete the checklist below based on newspaper ads or on a supermarket visit.

Item	Store 1	Store 2	Store 3
1.			
2.			
3.			
4.			
5.			

FOODS WE EAT AT HOME

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
7. Students will be able to discuss ethnic foods and their origins and will invite parents of various ethnic backgrounds to visit the class and demonstrate ethnic cooking.	1. Have students describe or write favorite family menus. Use this as a lead in to "Why Do Different Families Have Different Patterns?" (K-6)	1. Nutrition Education (K-3) p. 42
	2. Discuss the concept of the oral recording of family histories. Use <u>Roots</u> as an example. Ask your students to use the "Three Generation Questionnaire" to record their families eating habits. (4-6)	2. Nutrition Education (K-3) p. 195
	3. Discuss with the students that many times people do not know why they make choices. The process outlined in "Pick Your Favorite" will enable students to think about why they make their food choices. (4-6)	3. Nutrition Education (K-3) p. 215
	4. Have your students plan an international buffet using the ideas presented in "The Food Follies." (4-6)	4. <u>High Feathers</u> pp.54-55
	5. Your may use the information in "Cultural Influence: to extent the above activity. (5-6)	5. Nutrition Education (3-6)

SUB-TOPIC: Why do different families have different eating patterns?

ENABLING OBJECTIVE: The learner is able to explain why different families may eat different kinds of food.

LEARNER ACTIVITIES

58. Make a list of the different kinds of menus found in different cultural and ethnic groups. Encourage the pupils to talk about foods their families especially enjoy. If some of the pupils cite foods that others have not eaten, arrange to bring some of that food to class for the other children to taste.

59. Discuss the methods of eating in other countries.

- . What are some eating utensils that are used in various countries?
- . How are these foods prepared? (Seasoning, cooking, serving, etc.).
- . Why do people choose the foods they do?
- . Why do mothers choose the foods they do for the family?

— Nutrition Education

TEACHER INFORMATION

You may want to review the Dairy Council's poster, What Did You Have for Breakfast This Morning?

The class will conclude that families have their own favorite foods.

Invite a foreign student from the high school or a college to come and talk with the class about the foods eaten in his or her native country. Discuss how these foods differ from or are like those in the United States.

You may want to make a list of certain dishes identified with certain nationalities. This can be done in conjunction with social studies.

Possible answers are because she likes them, the family likes them, they are nutritious, they are economical, they are easy to prepare, they are available.

Vocabulary:

cook
culture
foreign

native
nationality
serve

Three Generation Questionnaire

To find out first-hand how our food supply and eating habits have changed over the years, try these questions on your family and friends. First interview yourself to check out your present eating habits. Then interview one of your parents and, finally, a grandparent, or a neighbor or friend who's in the same generation as your grandparents are or would be. When you finish, you can compare the way you eat now to the way your parents and grandparents ate when they were your age.

1. What foods did you and your family eat when you were a child that you don't eat as much of now? How did your ethnic background influence the foods you ate? What is that background?
2. Where did you get your food? (Your answer should be specific: supermarket, farmer's market, garden, farm, milkman, etc.)
3. Who prepared your meals? How much time did the cook spend on meal preparation?
4. How were your mealtimes as a child different from the way they are for most children today?
5. What days of the week or year did you eat special meals when you were a child?
6. Did you eat any special home-remedy foods when you were sick? What were they?
7. What foods do you like or dislike because they remind you of places, things, or people of the past?
8. Which foods do you eat now that seemed strange or unappetizing when they were first introduced to you?
9. What major changes in food processing have occurred since you were a child? What kinds of gadgets or new foods have become available.
10. What changes in food since your childhood do you think are improvements? What changes do you regret?

Project Inside Out

Pick Your Favorites

Try this activity to get a start on finding out why you choose the foods you do.

Number a piece of paper from 1 to 10. Then make a list of your ten favorite foods. You can include anything--your favorite dinner, snacks, fruits and vegetables, lunches, or your own inventions.

When you finish your list, mark seven columns next to it to make a chart like the one below.

FOOD	TOP 3 FAVORITES	SEASON	RESTAU-RANT	GRANDPARENTS' COUNTRIES	SPECIAL OCCASIONS	FROM FOREIGN COUNTRY	NEW
1. lasagna 2. peach 3. taco 4. yogurt	*	A	✓			✓	✓

1. In the first column put a * next to the three foods you like best. If you asked your parents their three favorite foods, do you think they'd pick the same three as yours?
2. In the second column mark the season of the year you eat those ten favorites. Write "S" for summer, "F" for fall, "Sp" for spring, "W" for winter, and "A" for foods for all seasons.
3. Check (✓) the third column for those foods that you eat only in restaurants.
4. Check (✓) the fourth column next to the foods that come from the countries where your grandparents or greatgrandparents lived before they landed in America.
5. Check (✓) the fifth column for the foods you eat mostly on special occasions like birthdays or Thanksgiving or the last day of school.
6. Check (✓) the sixth column for any food that comes from a foreign country (like egg roll or lasagna).

The Food Follies

Learning Activities

Have students work with a partner to choose a foreign country to research. Topics can include:

- . food habits
- . meal patterns
- . agricultural production
- . customs and traditions

Have students prepare a foreign dish characteristic of the country studied.

- . Organize an international buffet.

Have students trace a map of the world on a wall mural. On each major country, draw small pictures of the agricultural commodities produced there.

Have students write to the United Nations' Food and Agricultural Organization (FAO) for information on diseases caused by malnutrition.

Food and Agriculture Organization of the United Nations
Liaison Office for North America
1325 C Street, S.W.
Washington, D.C. 20437

Rice is a staple crop in many countries. Have students look through cookbooks for a variety of rice recipes.

- . Plan to prepare some of the rice dishes for the class to try.

Prepare homemade white bread in class. Compare homemade bread to enriched, white, and commercial bread using a scorecard. Compare:

- | | | |
|---------------------|--------------|---------|
| . nutritional value | . texture | |
| . ingredients | . appearance | . taste |

Have students identify an elderly person they can visit.

- . Make arrangements to go to the person's home once a week.
- . Offer to run errands or do small tasks to help out.

___ High Feathers

SUB-TOPIC: Cultural Influence

ENABLING OBJECTIVE: The learner is able to describe the cultural origin of some foods and its influence on food selection.

LEARNER ACTIVITIES

31. Have each pupil choose a country and find out all they can about the kinds of foods its people eat.
 - . Make comparisons among three or four countries.
 - . What importance do the people place on food socially, for maintenance of life, or politically?
 - . Are the people of the country generally well-nourished?
 - . What problems exist in the country relative to food supplies, and to nutrition?
 - . Compare two countries that are close together but from two continents.
 - . What effects have rapid means of communication and transportation had on eating customs and on dietary changes of countries?
32. Have the class plan a "United Nations Lunch" for which members of the class can, in small groups, research what people eat in several countries. Plan a lunch menu or menus as appropriate.

Nutrition Education

TEACHER INFORMATION

This can be implemented as a part of a general social studies report. In this case, the role of food could be treated more broadly; i.e., the effect of the food supply on the political, economic and social way of life of the country.

It might be interesting to discuss why or how certain foods are more customary in one country than another. Take into account climate and other agricultural factors, trade, economy and the like.

For example, corn, turkey, fish, squash, pumpkin, berries, venison, quail, and pheasant are foods that are frequently found in the diets of Americans. Most of these also are foods that the Native American Indians ate. Therefore, our diets include a combination of European and American Indian foods primarily. In the past 75 to 100 years, Oriental foods have also become popular. The climate of the United States is such that a wide variety of fruits, vegetables and grains can be grown. Also, a variety of animals are raised to provide meat, eggs, and milk.

Relate the recent establishment of Coca Cola, for example, in Mainland China.

Determine whether one of the menus planned can be served as a part of the regular school lunch program. The pupils may want to observe how this lunch is received by the rest of the pupils in the school.

33. Through discussion, list on the chalkboard the foods eaten in the United States that the American Indians ate prior to the coming of the Europeans.

34. List some of the foods that are eaten in the United States that were brought from other countries. List some foods that were developed since the establishment of the United States.

- . Do all Americans eat the same foods?
- . What are ethnic foods?
- . What differences exist among groups in the United States in the food they eat?
- . Are there any foods that all Americans eat?

A trip to the supermarket may reveal more explicitly the varieties of foods that are already prepared. Have the class examine the labels of some prepared foods; e.g., chili, stew, TV dinners, for food nutrients they contain.

35. Have the pupils examine their own eating patterns.

- . Compare with others in their family. Are there similarities? Why?
- . Where do many of our eating practices originate?
- . Compare with their peers. Are there similarities?
- . What can be concluded from these comparisons?

Corn and squash will most likely lead the list. Be sure to mention the varieties of wildlife such as deer and buffalo and the varieties of plants, especially fruits such as berries, that were eaten by the American Indians. Discuss also the life-styles--some were chiefly agricultural, others hunters. The American streams and rivers were also rich sources of fish.

It might be interesting to identify and discuss some of the special kinds of foods Americans eat; for example, New England clam chowder and Manhattan clam chowder, Soul food, Mexican food, Oriental food, Italian food, and Polish food. This shows the importance of cultural influences in regard to the wide variety of foods eaten in this country.

Students in small groups can find out about a particular food through library research and through resource persons. Simple foods may be prepared by the pupils in order to taste them. More elaborate dishes perhaps could be prepared in cooperation with the school food services, the home economics department or by mothers.

Many of our eating patterns are established early in life through family food practices. As we grow older and expand our social environment, peer influences come into play. Also, food advertisements are strong influences of some of the foods we eat.

FOODS WE EAT AT HOME

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
8. Students will prepare and distribute a class/center cookbook containing those recipes for foods most frequently eaten at home, including ethnic recipes and will, if possible, prepare some of the recipes for consumption by class and school staff.	1. The recipes in this section will serve as a starting point for the cookbook. Students should ask their families to contribute to the cookbook. . Snack Cookbook & Food Art . Indian Maize Pancakes with Homemade Pancake Syrup . Robin's Omelets . Let's Make Yogurt . African Bean Soup . Matzo Ball Soup . Orange Consomme from Haiti . Clare's Vegetable "Chopped Liver" . Tea Eggs from Peking . Cold Noodles with Chicken and Peanuts . Arroz a La Regenta . Chicken Drumsticks . Codfish Cakes-Jamaica Style . Barbecued Hamburgers . Pigs in Blankets	"Be A Choosy Chewer" Card #9 Betty Crocker's Cookbook for Boys & Girls p. 77 Let's Go Exploring A Touch of Soul p.82 Cooking The Caribbean Way p. 22 Regional Cooking of China p. 47 Regional Cooking of China p. 76 The Art of Caribbean Cookery p. 174 A Touch of Soul p.202 New Betty Crocker Cookbook p. 48

FOODS WE EAT AT HOME

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
8. (Continued)	. Pistachio Nut Butter from Grenada	Cooking The Caribbean Way p. 36
	. Peanut Sauce from St. Maarten	Cooking The Caribbean Way p. 36
	. Hopping John	
	. Italian Mashed Potatoes with Parmesan Cheese	The Classic Italian Cookbook p. 384
	. Coconut Pudding-East African Style	Lorelle's Cooking Manual
	. Greens and Cornmeal Dumplings	A Touch of Soul p.19
	. Cornmeal Dumplings	
	. Ensalada Rosada	The Art of Caribbean Cookery p. 128
	. Blackeye Pea Salad	A Touch of Soul p.64
	. Bean Curd Salad Szechwan	Regional Cooking of China p. 57
	. Fried Plantains from Bermuda	Cooking The Caribbean Way p. 73
	. Lentil Salad-West African Style	Lorelle's Cooking Manual
	. Macerated Orange Slices	The Classic Italian Cookbook p. 452
2.	The glossary of ingredients can be used as a starting point in teaching spanish using food names as a "common denominator" between Hispanic and non Hispanic students. Gradually introduce new, food related and non-food related words as appropriate.	The Art of Caribbean Cookery

Snack Cookbook

Language Arts -- Math -- Art

Grandma says:

You can make a snack cookbook. It will be fun to use at home. I have lots of snack ideas in my "Magic Cupboard." You have good ideas, too.

A. To make a cookbook--

1. Think of good snacks. Maybe you eat them at home. Maybe you just had them in class. Ask your teacher to write the recipe on the blackboard.
2. Ask for Worksheet E to start your cookbook.

A Good Snack

Recipe title _____

What you need:

food

What you do:

What you need:

equipment

Draw a

picture of

the food

Make one page each time you have a snack of the week. Add it to your cookbook.

___ Be A Choosy Chewer

B. Make your cookbook grow!

Snack of the week--the special snack on your class bulletin board can give you ideas!

Pick one kind of snack for each week. How about--

- . a fruit juice--apple juice with wheat crackers
- . a raw vegetable--carrots, green pepper, and dip
- . a vitamin A food--carrot cupcakes/broccoli pancakes
- . a vitamin C food--orange wedges
- . a whole-grain snack--whole-wheat pizza
- . a crispy, crunchy snack--Grandma Salad
- . a milk or fruit punch--Witch's Brew
- . a cold milk snack--a small carton of yogurt

C. You can make place mats for snacktime.

Here's how!

- Cut a place mat out of plain white paper.
- Draw foods and snacks on it. Color them.
- Press the place mat between two pieces of contact paper.
- You can use your place mat at school or take it home.

D. Are you learning about snacks? Find out!

Play "Who Am I"!

Pin a picture of a snack on the back of each student. Walk around and try to find out what snack you are. Ask questions that have "yes" or "no" for an answer.

Am I round?
Am I juicy?
Am I green?
Am I hot?

Indian Maize Pancakes

About 16 pancakes

Utensils

Griddle
Cup
Spoon
Medium bowl
Egg beater
Pastry brush
Pancake turner

Ingredients

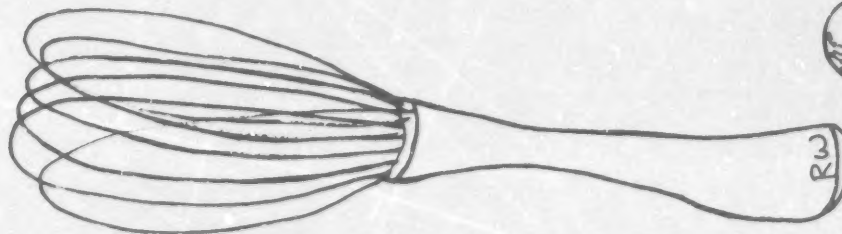
1 can (7 ounces) whole kernel corn
1 egg
1 1/4 cups all-purpose flour*
2 tablespoons shortening
1 teaspoon sugar
1 teaspoon baking powder
1/2 teaspoon baking soda
1/2 teaspoon salt
1 1/4 to 1 1/2 cups buttermilk

1. Heat griddle over medium heat or heat electric griddle to 375°.
2. Drain the liquid from the can of corn into cup. Spoon out 1/2 cup corn from the can and set aside. Pour the liquid in the cup back into the can and save the corn for another time.
3. Beat 1 egg in bowl until the white and yellow are mixed.
4. Add 1 1/4 cups flour, 2 tablespoons shortening, 1 teaspoon sugar, 1 teaspoon baking powder, 1/2 teaspoon baking soda and 1/2 teaspoon salt. Gradually add 1 1/4 to 1 1/2 cups buttermilk.** Beat until smooth. Stir in the 1/2 cup corn.
5. Grease the hot griddle with shortening if necessary, using pastry brush. For each pancake, pour 1/4 cup batter in a pool onto the hot griddle.
6. Cook until bubbles appear. Turn with pancake turner and cook until golden brown on the other side. (Lift an edge and peek.) Serve with Homemade Pancake Syrup.

*If using self-rising flour, omit the baking powder, baking soda and salt.

**If you like thick pancakes, use 1 1/4 cups; if you like thinner pancakes, use 1 1/2 cups.

From Betty Crocker's New Cookbook for Boys and Girls



Homemade Pancake Syrup

1 3/4 cups syrup.

Utensils

Small Saucepan
Long-handled spoon

Ingredients

1 1/2 cups brown
sugar (packed)
3 3/4 cup water
1 tablespoon butter or margarine
Dash of salt
1/2 teaspoon
maple flavoring

1. Mix 1 1/2 cups brown sugar, 3/4 cup water, 1 tablespoon butter and a dash of salt in saucepan.
2. Heat to boiling over medium heat, stirring constantly. Remove from heat. Stir in 1/2 teaspoon maple flavoring. Serve warm.

Robin's Omelettes

For 1 omelette:

2 eggs
milk
2 Tbsp. butter

Choose 1 or more ingredients for filling:

ham, diced cooked bacon, cheese,
mushrooms, onions, peppers, tomatoes

1. Prepare filling ingredients. Chop into small pieces.
2. Beat eggs with fork or whisk.
3. Add milk and stir.
4. Melt butter in pan over a medium flame.
5. Pour in eggs.
6. When eggs are cooked, carefully flip or turn eggs over.
7. Sprinkle ingredient(s) on one side of eggs.
8. Fold over. Shut off flame.
9. Remove omelette carefully.

Let's Make Yogurt
(Makes about 1 quart)

You Need:

- 1 1/2 to 2 cups non-fat dry milk
- 2 tablespoons yogurt, plain starter (check the label to make sure it's an "active culture")
- 1 to 2 tablespoons honey
- A 1-quart jar with cover
- A deep pot for incubating the yogurt

1. Fill a jar 1/3 full with dry milk.
2. Add water at 90-95°F till jar is almost full. You can check the temperature with a thermometer or use the "wrist test," when it feels neither hot nor cold.
3. Add the yogurt starter and honey. Stir or shake.
4. Put jar in a large pot filled with water at about 100-110°F. This water should feel fairly warm, using the "wrist test."
5. Incubate 4 to 12 hours. Set the pot on a heat source: the pilot light of a gas stove, in an electric oven between "off" and the lowest setting, in an electric oven with a 100-watt bulb that is on, in a down parka or vest or old blanket, or in a food warmer, thermos bottle or picnic cooler filled with jars of warm water.
6. Remove from incubator and refrigerate.
7. Top with fresh or canned fruit for a snack or dessert!

___ Let's Go Exploring

African Bean Soup

This thick soup is a hearty meal in itself. It has a variety of beans cooked together with ground meat, a variety of spices, and coarsely ground peanuts. It tastes like a Congolese soup or stew, but I have adapted some of the ingredients.

1 cup each dried blackeye peas, navy beans, lima beans (I prefer fresh frozen lima beans which are added during last 25 minutes of cooking time)
1 lb. ground beef
2 onions, chopped
1 small bunch celery, with tops chopped
1 small bunch parsley, chopped
2 tsp. basil
Crushed red pepper to taste
1 green pepper, dices
1/4 cup whole coriander, crushed, or 2 tsp. powdered coriander
6 tbs. margarine
Salt and pepper to taste
1 cup peanuts, coarsely ground

Wash beans. Soak overnight in water to cover. In large soup pot saute meat and vegetables and spices in butter. Simmer 15 minutes. Add beans and enough cold water to cover. Simmer on low flame 4 to 5 hours, covered. Add more water as needed. Add peanuts last 15 minutes of cooking time.

Serves 8-10

Matzo Ball Soup

4 eggs
1/2 cup water
1 cup matzo meal
1/3 cup melted shortening or oil
1 tsp. salt
dash pepper
Large cans of chicken broth

1. Add water, melted shortening, salt and pepper to the beaten eggs. Mix well.
2. Add matzo meal and stir thoroughly.
3. Let stand 20 minutes in refrigerator.
4. Form balls with your hands and drop into soup or 1 1/2 quarts boiling water with a tablespoon of salt.
5. Cook 20 minutes.

Orange Consomme (Haiti)

4 Servings:

1 large can consomme	3 cloves
juice of 3 oranges	1 orange, thinly sliced

Bring consomme, juice and cloves to the boil. Serve immediately, decorating individual servings with orange slices.

This soup is equally good served ice cold.

Clare's Vegetable "Chopped Liver"

12 walnuts
15 crackers, e.g., Ritz, Hits, Hi Ho
6 eggs-hard boiled
3 onions - sauteed in 3 Tablespoons vegetable oil
2 Tablespoons mayonnaise
1 1-pound can string beans - drained
1 1-pound can peas - drained

Chop or grind all ingredients together.

Tea Eggs (Peking)

8 eggs
3 tablespoons black tea leaves
1 cinnamon stick
3 whole star anise
1 tablespoon salt
preserved ginger

Boil eggs in water to cover for 10 minutes; drain and let stand in cold water until cool. Crack shells but do not peel. Place eggs, in one layer, in a saucepan with tea leaves, cinnamon stick, star anise and salt. Cover with water and cook over low heat 1 hour. Remove from heat and let cool in tea water. Shell and serve whole or halved with preserved ginger.

Cold Noodles With Chicken and Peanuts (Peking)

Dressing c

- 1/4 cup water
- 3 tablespoons sesame-seed paste or peanut butter
- 3 tablespoons peanut oil
- 3 tablespoons red rice vinegar or red wine vinegar
- 1 teaspoon sugar
- 3 tablespoons light soy sauce
- 1 tablespoon Oriental sesame oil

- 1 pound fresh egg noodles, parboiled and chilled 2 hours
- 1 cup cooked, shredded chicken meat
- 1/2 cup chopped roasted peanuts
- 2 tablespoons toasted sesame seeds
- 1/4 cup minced green onion or chives

Combine dressing ingredients, blend well and set aside. Place chilled noodles on serving dish and top with chicken, peanuts, sesame seeds and green onions or chives. Drizzle dressing over and serve.

Rice "A La Regenta"

Arroz a la Regenta
(Serves 6)

A. Stock:

6 cups water
2 1/2 teaspoons salt
1 onion
2 cloves garlic, peeled
2 peppercorns
2 pounds chicken breasts

B. Rice:

1 pound small white onions,
finely chopped
1/4 pound butter
2 1/2 cups rice
1/2 cup grated Parmesan cheese
3 3/4 cups chicken stock
(see Instruction 2)

C. Sauce:

1/4 pound butter
2 tablespoons flour
1/4 teaspoon salt
1/8 teaspoon white pepper
1/2 cup white wine
1 cup chicken stock (see Instruction 2)

D. 1 4-ounce can pimientos

1 can (1 pound 1 ounce) green
peas

1. Combine A ingredients in a kettle, except chicken breasts. Heat to boiling. Add chicken breasts. When boiling, cover and cook over medium-low heat for 45 minutes.
2. Strain and reserve 4 3/4 cups stock to prepare rice and sauce, and separate chicken meat from bones. Cut chicken meat into pieces and reserve.
3. Melt butter in a kettle and saute onions. Add rice and cheese, mix, and cook for 2 or 3 minutes.
4. Add 3 3/4 cups of chicken stock and boil rapidly until stock is absorbed. With a large spoon turn rice from bottom to top, cover, and cook over low heat for 20 minutes.
5. Melt butter slowly in a saucepan. Add flour and stir until smooth. Add gradually rest of ingredients included in C. Cook, stirring until sauce is medium thick. Add chicken meat, mix, and boil for 2 or 3 minutes.
6. Press rice in a round pan shaped like a ring and turn pan into a platter.
7. Pour sauce in center.
8. Decorate rice with pimientos, thinly sliced. Heat green peas and place around rice. Serve at once.

Chicken Drumsticks

1 drumstick for each child
bread crumbs
salt and pepper

2-3 eggs
oil

1. Rinse the chicken legs.
2. Dip in egg.
3. Roll in bread crumbs.
4. Heat oil in skillet.
5. Carefully place chicken in oil.
6. Cook for 15 minutes, turn over and cook for an additional 15 minutes.
7. Remove drumsticks from skillet and place them on paper towels.
8. Season them to taste with salt and pepper.
9. Serve!



Codfish Cakes - Jamaica Style

1/2 lb. dried boneless codfish
1 medium onion
1 green sweet pepper
1 teaspoon red pepper flakes

1 teaspoon baking powder
1 egg - 1 tablespoons flour
1 tablespoon catsup
4 tablespoons oil

1. Soak the codfish overnight in cold water.
 2. Drain the codfish.
 3. Put the codfish in a saucepan, cover the codfish with cold water and simmer it over medium heat for 15 minutes.
 4. While codfish is simmering, chop the onion.
 5. In skillet heat one tablespoon of the oil and saute the chopped onion in it.
 6. Chop the green sweet pepper.
 7. When the codfish has finished simmering, pour off the water.
 8. With a fork, pull the cooked codfish apart into small pieces.
 9. Mix the sauteed onion, red pepper flakes, baking powder, egg, flour, green pepper, and catsup with the pieces of codfish.
 10. Heat the 3 tablespoons of oil until it is hot.
 11. Drop the codfish mixture in the hot oil by tablespoons.
 12. Cook the codfish cakes over medium heat on both sides until they are golden brown.
 13. Drain them on paper towels and serve while they are still hot.
- This will serve six people.

Barbecued Hamburgers

2 lbs. ground chuck
1/2 stick butter or margarine
1 tsp. garlic salt
4 scallions with tops, minced

Salt and pepper to taste
Dash hot sauce
1/2 tsp. fresh thyme or
1/4 tsp. dried thyme leaves
1 egg, beaten

Cream butter with garlic salt and minced scallions. Season meat with salt, pepper, dash hot sauce and thyme leaves. Add beaten egg.

Pigs in Blankets

Heat oven to 450 .

Prepare dough for rolled Biscuits as directed on package of buttermilk baking mix.

With lightly floured cloth-covered rolling pin, roll out dough into a square, 12 x 12 inches.

Cut dough into 12 oblong shapes, each 4 inches long and 3 inches wide.

Wrap each oblong around 1 frankfurter.

The ends of the frankfurter will peek out of the biscuit "blanket."

Place on ungreased baking sheet.

Bake 10 to 15 minutes.

Serve hot.

Makes 12 sandwiches.

Pistachio Nut Butter (Grenada)

1 oz. pistachio nuts
2 1/2 oz. butter
salt

Pour boiling water over nuts, then drain. Remove skins with thumb and forefinger, then pound or grind nuts adding a few drops of water. Mix in butter, add salt to taste and rub through a sieve.

Serve with Lobster Thermidor or other fish dishes.



Peanut Sauce (St. Maarten)

2 tablespoons onion, grated
2 tablespoons olive oil
2 tablespoons dark brown sugar
1 teaspoon lime or lemon juice

2 tablespoons peanut butter
6 tablespoons coconut cream (see page 42)
pinch salt

Saute onion in oil for 7 minutes. Stir in sugar, juice and peanut butter; add coconut milk little by little, stirring all the time. Stir in salt and cook over a gentle heat till sauce is smooth and thick.

Serve with barbecued meat.

Hopping John

1 6 oz. can of black-eyed peas
1 chopped onion
2 strips of cooked bacon diced

salt and pepper
1 cup of cooked rice

1. Put the peas in a large pot. Add onion, bacon and seasonings.
2. Simmer, covered for 1/2 hour
3. Taste, and correct the seasonings.
4. Mix the rice with peas, onions and bacon.

Italian Mashed Potatoes with Parmesan Cheese

There is something about potatoes that seems rarely to have stimulated Italian cooks to a very high pitch of creativity. Rice has had a similar perplexing effect on the French, whose risotti are so unsatisfactory. There are one or two nice things we do with potatoes, however. Gnocchi is the most famous of these. Another is this luscious puree of potatoes made with butter, milk, and a substantial amount of fresh Parmesan cheese.

For 4 persons

1 pound boiling potatoes
3 tablespoons butter
1/2 cup milk

1/3 freshly grated Parmesan cheese
Salt to taste

1. Put the potatoes, unpeeled, in a large pot with enough water to cover them well. Cover the pot, bring to a moderate boil, and cook until tender. (Do not test the potatoes too often with your fork, or they will become waterlogged.) Drain, and peel while still hot.
2. Bring water in the lower portion of a double boiler to a very slow simmer. Cut up the butter and put it in the upper portion. Puree the potatoes through a food mill directly into the upper pan.
3. In a separate pan, bring the milk to the verge of boiling. Turn the heat off just as it is about to boil.
4. Start beating the potatoes with a whisk or a fork, adding 2 to 3 tablespoons of hot milk at a time. When you have added half the milk, beat in the grated cheese. When the cheese has been very well incorporated into the potatoes, resume adding the milk without ceasing to beat, except to rest your arm for an occasional few seconds. The potatoes should become a very soft, fluffy mass, a state that requires a great deal of beating and as much milk as the potatoes will absorb without becoming thin and runny. (Some potatoes absorb less milk than others, so you must judge the correct quantity of milk as you are beating, both by taste and thickness of the mass.) As you finish adding the milk, taste and correct for salt. Serve piping hot.

Note: If necessary you can prepare this up to 1 hour ahead of time. Just before serving, warm in the double boiler and beat in 2 or 3 tablespoons of very hot milk.

Coconut Pudding--East African Style

2 cups sugar
6 cups water
6 whole cloves
4 cups grated coconut
12 egg yolks
cinnamon
nutmeg

Combine the water, sugar and cloves in a saucepan. Stir until mixture comes to a boil. Boil without stirring until mixture reaches a temperature of 230° on a candy thermometer.

Reduce the heat to low and remove the cloves with a slotted spoon. Add the coconut, 1 cup at a time, and cook while stirring for about 10 minutes, or until the coconut becomes translucent. Remove the pan from the heat.

In a large bowl, beat the egg yolks with a wire whisk or egg beater for about one minute. When the egg yolks begin to thicken, stir in one cup of the coconut mixture, and then stir in the remaining coconut mixture.

Place mixture back into the saucepan and cook over moderate heat for about ten minutes, or until the pudding thickens and pulls away from the bottom and sides of the pan.

Pour the pudding in a large heatproof bowl. Serve at room temperature. Just before serving, sprinkle the pudding with the cinnamon and nutmeg.

Source: Lorelle's Cooking School Manual

Greens and Cornmeal Dumplings

1 small onion
3/4 lb. slab bacon
2 tsp. crushed red pepper
1/2 lb. salt pork, thickly sliced
2-3 lbs. collard greens
1 bunch water cress (opt.)

1 lb. mustard greens
1 lb. turnip greens
1 lb. spinach
1 tsp. sugar
Salt and black pepper to taste

Since all the above greens are interchangeable in this dish, some may be omitted according to taste, but either collard or turnip greens should be included.

In 8-quart pot, place onion, bacon, and red pepper. Half fill pot with water. Let boil 1 1/2 hours. Meanwhile, fry slices of salt pork until brown. Set aside. Add collard greens and turnip greens to the boiling water with bacon. Cook 20 minutes and then add other greens. Sprinkle with sugar, salt and pepper to taste, and browned salt pork. Cover and turn flame medium to low. Cook 10 minutes and add cornmeal Dumplings. Cook over low heat for 20 minutes.

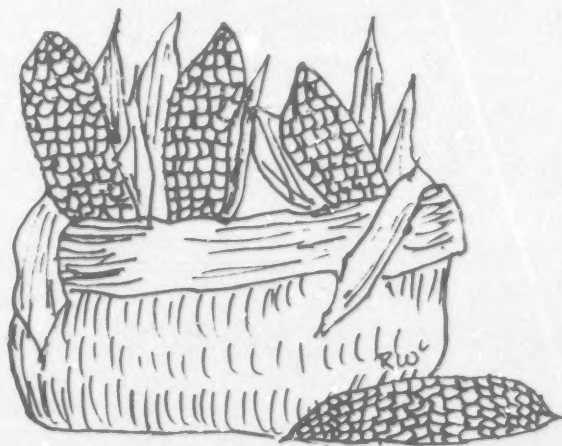
Cornmeal Dumplings

3/4 cup flour, sifted
1 1/4 cup yellow cornmeal
2 1/4 tsp. baking powder
1 1/4 tsp. salt

1 tbs. drippings
1 egg
3/4 cup milk

Mix and sift dry ingredients. Stir in drippings. Combine egg and milk. Stir in quickly to make batter just soft enough to drop. Drop by tablespoon to rest on top of greens. Cover pot and steam 15 minutes.

Serves 6



Ensalada Rosada
(Serves 12)

A. 3 1/2 pounds potatoes
2 quarts boiling water
4 tablespoons salt

B. 1 can (1 pound) diced beets
1 can (1 pound) green peas
6 hard-cooked eggs
3 apples

C. 1/2 cup olive oil
1/4 cup vinegar
2 tablespoons sugar
1 1/4 teaspoons salt
3 tablespoons mayonnaise

1. Wash potatoes and cook, without paring, in boiling water with salt included in A for 45 minutes. Drain, cool, peel, and cube.
2. Add diced beets, including the liquid, and mix.
3. Drain peas well, reserving some of the liquid to be added to the salad if necessary. Set aside about 1/2 cup of the peas to use as garnish and add rest to the potato-beet mixture.
4. Save 1 egg for garnish. Chop the rest finely and add to vegetables.
5. Pare apples, cut into cubes, and rinse in 1 quart water with 1 teaspoon salt. Drain well and add to salad mixture.
6. Combine dressing ingredients included in C, pour over the salad, and mix thoroughly.
7. Turn salad into salad bowl and sprinkle peas around in a border. Garnish with reserved egg yolk and white respectively, pressed through a coarse sieve.

Blackeye Pea Salad

2 cans blackeye peas, well drained, or 2 pkgs. frozen blackeye peas, cooked to taste (firm), drained well, and cooled
1 cup grated carrots
4-5 scallions, chopped
1/2 cup diced celery
3 heaping tbs. sweet pickle relish
Salt and pepper to taste
1/2 tsp. cayenne or crushed red pepper
4 hard-cooked eggs, chopped (optional)
4 tbs. mayonnaise (optional)
Shredded cabbage

Mix all the ingredients together thoroughly but gently (so as not to mash blackeye peas). Chill and serve over cabbage. With or without eggs and mayonnaise, this is a very tasty salad. Serves 6-8

Bean Curd Salad Szechwan

4 fresh bean-curd cakes
2 tablespoons small dried shrimp, soaked to soften (optional)
1 cucumber, peeled if skin is tough, seeded and cut in matchstick
2 or more dried red chili peppers, crushed
2 2 tablespoons rice vinegar
1 teaspoon Oriental sesame oil
1 tablespoon fish soy 3 tablespoons peanut oil

Parboil bean curd 1 minute and drain well. Let cool and slice thinly or cut into 1/2-inch dice. Combine with remaining ingredients. Chill before serving.

Variation--Add 1/2 cup cooked shredded chicken, ham or shrimp.

Fried Plantains (Bermuda)

plantains
powdered cinnamon

flour
butter

Slice plantains in three, lengthwise. Dust with flour flavoured with a little cinnamon and fry quickly in hot butter until golden brown.

Note: Green bananas may be used in place of plantains.

Lentil Salad--West African Style

1 cup dried lentils
2 tablespoons vinegar
1 tablespoon vegetable oil
1 teaspoon salt
8 scallions, chopped
2 fresh hot peppers, seeded and chopped
Freshly ground black pepper

Place the lentils in a sieve and wash them in cold water. Cook the lentils in boiling water to cover. Reduce the heat to low and simmer them for 25 to 30 minutes. Drain the lentils in a colander and rinse them in cold water and drain them.

Combine the salt, oil and vinegar in a bowl and beat them with a spoon or wire whisk. Mix this mixture with the lentils, scallions and fresh hot peppers. Add the freshly ground pepper to taste. Let the salad marinate for about 30 minutes at room temperature before serving.

Source: Lorelle's Eclectic Cooking School Manual. (Unpublished)

Macerated Orange Slices

Among all the ways in which a meal can be brought to a happy close, there is none, I think, that surpasses a dish of sliced oranges. Their bright, joyous color is an instant promise of refreshment, which they maintain by loosening from our taste buds the thick traces of the preceding courses, leaving nothing but happy memories and a fragrantly clean palate.

For 4 persons

6 eating oranges, such as navel, temple, or tange-orange
Grated peel of 1 medium lemon
5 tablespoons granulated sugar
Juice of 1/2 medium lemon

1. Peel just four of the oranges, using a very sharp knife. Take care to remove all the white spongy pulp and also as much as possible of the thick skin beneath.
2. Cut the oranges horizontally into thin slices about 3/8 inch thick. Pick out any seeds. Put the slices into a shallow serving bowl or deep platter and then grate the lemon peel into the bowl. (Avoid grating the white pulp beneath the peel.) Add the sugar. Squeeze the other two oranges and add their juice to the bowl with a dish and refrigerate for at least 4 hours, or even overnight. Serve chilled, turning the slices once or twice in the macerating liquid just before serving.

Note: You may add more sugar if you like the oranges much sweeter. Some people add 2 or 3 tablespoons of maraschino or Curacao just before serving. I do not because I find it interferes with the fragrance of the lemon peel. Try it both ways, if you like, and decide for yourself.

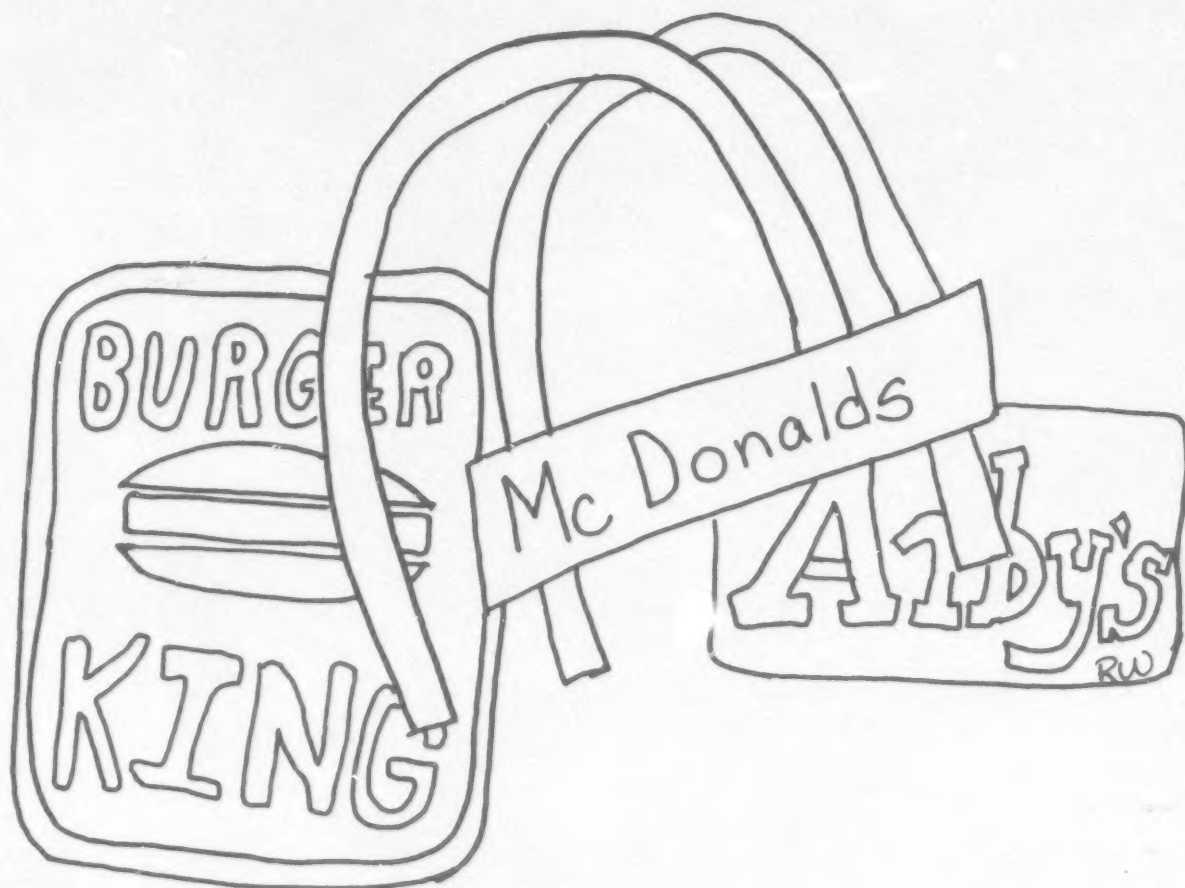
Glossary

Acerola,	West Indian cherry (<i>Malpighia puniceifolia</i>) A small cherry-like fruit of a shrub; very rich in vitamin C.
Achiote Seeds,	annato seeds (<i>Bixa Orellana</i>) The seeds of the annota tree used for coloring lard a bright yellow. Paprika or saffron may be used as a substitute.
Aji dulce,	sweet chili pepper (<i>Capsicum annum</i>) The dwarf green pepper which has a mild, sweet, and distinct flavor; ideal for seasoning dishes. It should not be confused with the hot pepper.
Ajonjolí,	sesame seeds (<i>Sesamum orientale</i>) The small, flat seeds of a tropical plant used in making beverages and candies.
Aniseed,	semilla de anís (<i>Pimpinella Anisum</i>) The tiny, aromatic seed of a plant which grows extensively in Spain.
Apío,	arracacha (<i>Arracacia xanthorrhiza</i>) The thick, edible rootstock of a tropical plant.
Breadfruit,	pana, panapen (<i>Artocarpus communis</i>) The large, roundish fruit of a tropical tree. A thick greenish rind covers the sweet, starchy flesh which is reminiscent in flavor and texture of a sweet potato.
Breadnut,	semilla de pana (<i>Artocarpus communis</i>) A variety of the tropical breadfruit tree; the fruit contains a large number of seeds resembling chestnuts. The seeds are eaten boiled.
Butifarras,	pork sausages A highly seasoned dry port sausage native to the Caribbean. It can be substituted with cuntry sausage or canned Vienna sausages.
Caldero,	cauldron A heavy cast-iron or cast-aluminum kettle or casserole, with round bottom and straight sides.
Casabe,	Cassava cakes Flat, dry cakes made from the grated roots of the cassava plant; it is used for soups and in the preparation of other native dishes.
Chayote,	christophine, pear-shape (<i>Sechium edule</i>) The roundish or pear-shaped vegetable of a climbing plant which grows extensively in the Caribbean and to some extent in Florida and Louisiana. The flesh is delicately flavored and similar to summer squash.

Chicarron,	pork cracklings
China,	naranja dulce, orange (<i>Citrus sinensis</i>)
Chorizo,	Spanish sausage A highly seasoned Spanish pork sausage; sun-dried and hot to the palate.
Culantro,	cilantro, coriander (<i>Coriandrum sativum</i>) The long, serrated leaves of a small plant which grows wild in the Caribbean. It is used for flavoring.
Gandul,	pigeon pea (<i>Cajanus Cajan</i>) This legume is generally eaten when green
Garbanzo,	chick-pea (<i>Cicer arietinum</i>) A legume popular in Mediterranean countries and in the Caribbean. It is used in soups and stews.
Guanabana,	soursop (<i>Annona muricata</i>) A large tropical fruit with a soft white and aromatic flesh. When ripe it is eaten raw or used in preparing beverages.
Guayaba,	guava (<i>psidium Guajave</i>) The round or pear-shaped fruit of the guava tree, which grows abundantly in tropical countries. The slightly acid flesh is enclosed by a yellowish-red thin skin. The fruit makes delicious jams, jellies, and preserves. It is also eaten raw; very high in vitamin C.
Hicaco,	coco plum (<i>Chrysobalanus icaco</i>)
Lechosa,	papaw, papaya (<i>Carica Papaya</i>) The fruit of a tropical tree. Its flavor is very similar to that of a melon. The green fruit is used in preserves; when ripe the yellow flesh is sweet and musky. It is delicious eaten raw. Its high content of papain makes it a valuable foodstuff.
Lerenes,	sweet corn root (<i>Calathea Allouia</i>) The small, white tuber of a tropical plant very common in Cuba and other islands of the Caribbean. Always eaten boiled.
Mabi,	naked-wood (<i>Colubrina reclinata</i>) The bark of the naked-wood tree, which is used to prepare a fermented beverage very popular in the Caribbean.
Mamey,	mammee apple (<i>Mammea americana</i>) The fruit of a large tropical tree with bright yellow, juicy flesh. It is eaten both raw and cooked or preserved.

Mango,	mango (<i>Mangifera indica</i>) One of the most delicious of tropical fruits which is being shipped in large quantities to northern markets, especially in April and May. When ripe, the orange flesh is sweet, juicy, and aromatic. Unripe or green mangoes form the basis of many chutneys.
Naranja Agria,	sour orange (<i>Citrus Aurantium</i>) A very sour orange, not to be confused with the bitter orange grown in the South.
Naranja dulce	(See China)
Nispero,	sapodilla (<i>Sapota Achras</i>) The fruit of a tropical tree. The smooth, aromatic tan pulp is covered by a thin, brown, skin. Eaten only when ripe, it has a very delicate and distinct flavor.
Name,	yam, (<i>Dioscorea alata</i>) The irregular-shaped tuberous roots of a tropical plant.
Oregano,	Puerto Rican marjoram (<i>Lippia Herrerii</i>) The small, oval-leaf plant is a variety of the sweet marjoram used in seasoning. It is so abundant in the Caribbean that it is usually used fresh.
Pajuil,	cajuil, cashew, (<i>Anacardium occidentale</i>) The kidney-shaped fruit of the cashew-nut tree. The kernels or nuts are roasted for marketing, while the fruit is used in preparing preserves and candies.
Pana,	(See Breadfruit and Breadnut)
Papaya,	(See <i>Lechosa</i>)
Platano,	plantain (<i>Musa paradisiaca</i>) A variety of the banana which cannot be eaten raw. Coarser in texture than the ordinary banana, it is harvested while green and is baked, fried, or boiled. When ripe it is called amarillo.
Tamarindo,	tamarind (<i>Tamarindus indica</i>) The thin, brown, pods of a large tropical tree. The pods, containing from one to four seeds, are filled with a sweet-sour brown pulp, which is used in making of beverages and chutneys.
Yautia,	tanier (<i>Xanthosoma atrovirens</i> and <i>sagittaeifolium</i>) The starchy roots of a tropical large-leaved plant. The flesh is usually creamy white or yellow and is similar in flavor and texture to a mealy Irish or Idaho potato.
Yuca,	cassava (<i>Manihot Manihot</i>) A tropical plant with fleshy rootstock yielding a nutritious starch. It is used as a food and in the making of tapioca and casabe cakes.

Foods We Eat In Restaurants



FOODS WE EAT AT RESTAURANTS

The advent of fast food restaurants has opened the "eating out" experience to many people who previously only ate at home. At the same time, however, the fast food experience has done little for the nutritional values of foods many Americans eat.

Students, particularly those in special education who often have special nutritional needs, have to be taught to eat the proper foods at restaurants as well as at home.

The activities in this theme are designed to allow your students to explore the eating out experience while at the same time understanding the nutritional value of the food they are eating.

In addition, students will understand the various jobs that make up a restaurant community, an important first step to an awareness of careers in this service area.

The performance objectives for this unit are:

Students will identify those restaurants found in their neighborhoods.

Students will make a collection of menus from restaurants they have eaten in order to compare the restaurants in a number of different ways.

Students will ascertain, through surveys and TV viewing, which restaurants are the most popular with young people.

Students will investigate the kinds of jobs available in restaurants.

FOODS WE EAT AT RESTAURANTS

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
1. Students will identify those restaurants found in their neighborhoods.	1. Have the class plan and take trips ranging 10 blocks in each direction using the school as a central point. Have students take notes on each of the restaurants they find within that area. (K-6) 2. After the trips have been completed, have students draw a map of the area which was surveyed showing all of the restaurants they found. (3-6) 3. Allow the students to discuss the various restaurants in their neighborhood in terms of type, ethnic food served, and other variables. (3-6) 4. Discuss the terms "fast food," "full service," etc. with your students. What would they expect to find in each of the types of restaurants? (K-6) 5. Discuss the differences and similarities between food in the various restaurants and food at school (at home). (4-6) 6. Have students survey other classes in the school to find which restaurants are the most popular. Have students prepare a bar graph showing their findings. (4-6)	

FOODS WE EAT AT RESTAURANTS

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
2. Students will make a collection of menus from restaurants they have eaten at in order to compare the restaurants in a number of different ways.	1. Students will collect at least three menus from different restaurants. They may do this on their own or with the help of their parents. An attempt should be made to get menus of various types and from various kinds of restaurants. (2-6) 2. Students will make a scrapbook in which to exhibit the menus they have collected. (2-6) 3. Look at Activity #4 in Objective 1. Students will make a chart showing the various types of restaurants (fast food, full service, etc.) and list the local restaurants under the appropriate title. (2-6) 4. Choose one menu from each of the categories outlined above. Let students look at the menus for awhile. What differences do they see? What similarities do they see? How do the ingredients used differ? What foods are served in various restaurants? What foods are served only in specific types of restaurants? (2-6) 5. Pick some menus that are representative of ethnic foods. What ethnic backgrounds do they foods represent? How is the food served in these restaurants different from that served in the restaurants chosen in Activity #4 above? (2-6)	

FOODS WE EAT AT RESTAURANTS

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
2. (Continued)	6. Students will invite a restaurant owner from each of the identified categories to speak with the class. Have the class develop a series of questions to ask each owner. After the visits, have class discuss the differences between the answers. (2-6) 7. Students will use all of the material gathered in this unit to decide which type of restaurant is best, in terms of both price and nutritional value. If answers differ, let class discuss why one type of restaurant might not be both inexpensive and nutritious. (2-6) 8. Students will plan and assemble a restaurants bulletin board in the classroom. This bulletin board can be used for various purposes-- displaying menus, for example, pictures of restaurants or favorite foods. (K-3)	



FOODS WE EAT AT RESTAURANTS

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
3. Students will ascertain, through surveys and TV viewing, which restaurants are the most popular for young people.	1. Students will list their favorite restaurants in a one to five rank order. Use these lists to make up a ballot which will be used to survey other classes in the school. Make a bar graph depicting the class choices. (1-6) 2. Students will watch TV in the early evenings and on weekends to tally those restaurants that are most advertised on TV. Discuss in class the type of restaurants most advertised during children's programs. (use Activity 3, Objective 2 as a guide.) (3-6) 3. Students will use the information gathered in the preceding two activities to decide which restaurants are the most popular with young people. Share their findings with the rest of the school. (3-6) 4. Discuss the types of restaurants which were the favorites above. Why are they favorites? What kinds of food do they serve? Are they the healthiest as well as the most popular? Why? Why not? (3-6)	

FOODS WE EAT AT RESTAURANTS

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
4. Students will investigate the kinds of jobs available in restaurants.	1. Students will invite workers from various types of restaurants to speak with the class about their jobs. (K-6) 2. Students will role play job situations in the classroom, using information gathered by questioning and listening to the guest speakers. (K-6) 3. Students will compare the tasks of restaurant workers with those who prepare food at school or at home. What are the differences? What are the similarities? (3-6) 4. Students will keep a Restaurant Workers bulletin board made up of drawings or pictures to show various restaurant jobs. (K-6) 5. Wherever possible, students will visit a restaurant to see people prepare and serve food. (K-6)	

FOODS WE GROW



FOODS WE CAN GROW

Students in New York City special education programs live in an urban environment where there are few opportunities to experience first-hand how foods are grown and processed. For that reason, the special education classroom provides an excellent opportunity for students to grow and process their own foods.

This theme provides activities which will give the students a chance to grow food, process that food, and compare what they have grown and processed with foods prepared commercially.

The performance objectives for this unit are as follows:

Students will choose one meal menu from each of the following sources: Home, School, and Restaurant, using as many of the ingredients found in Activity #2 in their menus as possible.

Students will collect sample recipes in a box or scrapbook, using those recipes for later menu planning and preparation of food.

Students will compare the cost and nutritional value of growing plants themselves with the cost and nutritional value of store-bought plants.

Students will investigate the various methods of storage of foods they have grown.

Students will plan a classroom garden and grow some of the items in Objective #2.

Students will examine parts of a plant.

FOODS WE CAN GROW

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
1. Students will choose a one meal menu from each of the following sources: (a) home (b) school (c) restaurant using as many of the ingredients found in activity #2 in their menus as possible.	1. Students should complete the "Meals Checklist" by listing the things they ate for each of the meals. When that is completed, students should use the "Foods We Grow" page to designate those foods above or paste magazine pictures of the foods in the appropriate spaces. (K-6) 2. Use one or more of the above foods in a menu. Then find the recipe for that menu item and write it down. (4-6) 3. Students should begin to keep a recipe file in a box or in a scrapbook. Have students copy down and keep all the recipes that are found in this theme, favorites from home, or simple recipes from newspapers or magazines.	1. Board of Education

Meals Checklist

1. What did you eat for breakfast at home?

2. What did you eat for lunch in school?

3. What did you eat for dinner in the restaurant?

Foods We Grow

1. Activity - Breakfast (Home)

2. Activity - Lunch (School)

3. Activity - Dinner (Restaurant)

Recipes for Your Menu

Choose one item from each meal's menu and make up or find the recipe for those items.

BREAKFAST _____

LUNCH _____

DINNER _____

FOODS WE CAN GROW

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
2. Students will collect simple recipes in a box or scrapbook, using those recipes for later menu planning and preparation of food.	1. Students will copy the following recipes and add them to their recipe collection. a. Dried Apples b. Corn Crisps c. Fruit Ambrosia d. Grape Yogurt Jello e. Kabobs f. Irish Bread g. Apple Muffins h. Peanut Butter i. Quick Bread j. Applesauce Bread k. Corn Muffins l. Carrot Cup Cakes m. Banana Shake n. Sprouted Wheat Balls o. Special Salad	1. All recipes come from "Snacks, Yummies & Desserts, Central Park East School

(The salad, the last item has no recipe but students and teachers can make their own, using any number of vegetable combinations. Students should try to grow as many of the ingredients as they can using the methods shown in later activities in this unit.)



Dried Apples

You need:

Apples, Vitamin C Tablet, Water

Peel apples and cut into strips.
Drop one vitamin C tablet into one cup water.
Sprinkle on apples.
Stir all around and put apples on cooling tray.
Put in oven at 150°.
Leave oven-door slightly open.
Cook all day.

Corn Crisps

You will need:

1 cup cornmeal
1 Tablespoon vegetable shortening
1/2 teaspoon salt
6 Tablespoons boiling water (1 cup less 2 Tablespoons)

1. Preheat oven to 400°.
2. Grease a cookie sheet.
3. Mix all the ingredients together in a bowl.
4. Measure out 1 tablespoon of the mixture and shape into a ball.
5. Place the balls on the greased cookie sheet.
6. Dip the bottom of a glass in water and use it to flatten the ball into a 3 inch round.
7. Bake in the preheated 400° oven for 25 minutes, or until golden brown.

This recipe will make about 18 corn crisps.

Fruit Ambrosia

4 cups of orange sections (peel the oranges and gently break into sections)
2 bananas, sliced
1/2 cup nuts (unsalted)
2 ounces shredded coconut

1. Place one layer of orange sections in a bowl.
2. On top of the orange slices, place one layer of banana slices.
3. Sprinkle nuts on top, followed by coconut.
4. Repeat layers until all the ingredients are used up.
5. Chill for several hours.

This recipe makes 8 one cup servings.
Recipe may be halved for smaller amount.

Grape-Yogurt Jello

This makes a nice dessert. Or, it can be a breakfast treat.

1 package of unflavored gelatin
2 cups of grape juice
1 container of plain yogurt mixed with a bit of honey
wheat germ

1. Boil 1/2 grape juice and mix in the gelatin.
2. Add the rest of the grape juice and chill in a bowl.
3. When set, add the honey sweetened yogurt.
4. Sprinkle with wheat germ and eat.

Kabobs
Fruit and Vegetable

1. Use coffee stirrers to put the kabobs on.
2. Cut up fruits--
bananas
apples
pears
pineapples
melon
strawberries, cherries or grapes, but leave them whole
3. Push slices of fruit onto the stirrers.
Alternate fruits, then refrigerate until you eat them.
4. If you use vegetables, choose:
cherry tomatoes
sliced cucumber
olives
very thinly sliced carrots

Irish Bread

4 cups flour
4 tsp. baking powder
1/2 cup sugar
1/2 tsp. salt
1/2 cup butter
Add
1 cup raisins
2 eggs beaten
1 cup milk
Pour into a grease 8" round pan.
Bake at 350° for 1 hour.

Apple Muffins

This recipe will make 6 large cupcakes (or 12 small ones).

You will need:

- 1/4 cup honey
- 1/4 cup oil (such as safflower)
- 1 egg
- 1/2 cup + 2 tablespoons wholewheat flour
- 1/2 teaspoon baking powder
- pinch of salt
- 1/4 teaspoon allspice
- 1/4 teaspoon nutmeg
- 1/4 teaspoon cinnamon
- 2 tablespoons dry milk powder
- 7 tablespoons grated apple (including peel--make sure the apples are washed)
- 1/4 teaspoon vanilla

You can also add raisins (about 1/4 cup) and/or chopped nuts.

Here's what to do:

Preheat oven to 400°

1. Beat the honey, oil and egg together in a bowl.
2. In another bowl, mix all the dry ingredients together.
3. Add the flour mixture to the honey and egg.
4. Stir well.
5. Grate the apple and add to the mixture. Stir.
6. Add the vanilla. Mix.
7. Add the raisins and nuts. Mix well.
8. Grease the cupcake tins or use paper cupcake wrapper.
9. Fill the tins about 3/4 full.
10. Bake for 12-15 minutes.
11. Cool; then eat.

Making Peanut Butter

1. Buy 1 pound roasted peanuts in shells.
2. Shell the peanuts.
3. Put 1/2 cup peanuts into a plastic bag.
4. Close up the bag and pound the nuts until they are chopped up in little pieces.
5. Put the nuts into a bowl and mash then into very tiny bits with a pounder.
6. Add 1 teaspoon oil and keep mashing. It will take a while until it starts to get creamy.

Quick Bread

You'll need:

2 cups molasses
4 cups buttermilk, or yogurt
4 t. soda
7 1/2 cups whole wheat flour
1/2 cup wheat germ
salt
raisins

Mix all ingredients together in a large bowl.
Grease two 9 x 5 x 3 loaf pans and divide batter between them.
Bake at 375° for 40 minutes

Applesauce Bread

You will need:

1/2 stick butter or margarine
1/3 cup sugar
1 egg
1/4 teaspoon salt
1/2 teaspoon vanilla
1 teaspoon baking powder
1/2 cup wholewheat flour
1/2 cup unbleached white flour
3/4 cup applesauce

1. Beat butter and sugar until fluffy and creamy.
2. Add egg and beat.
3. Add flour and salt and baking powder. Mix well.
4. Add applesauce.
5. Mix all together.
6. Add vanilla and mix.
7. Pour batter into a greased loaf pan.
8. Bake at 250° for about 1 hour.
9. Remove from pan immediately.
10. Let cool completely. Then wrap and store one day.
11. Eat on the second day.

Corn Muffins

1. Put 2 tablespoons of soft margarine into a bowl and mix.
2. Add 2 tablespoons of sugar and mix well.
3. Share an egg with a friend. In a small bowl, beat the egg with a fork. Add half the egg to your bowl and mix.
4. On a piece of wax paper, put $\frac{1}{4}$ cup of corn meal. Add 1 teaspoon of baking powder and a pinch of salt.
5. Pour $\frac{1}{2}$ cup of milk.
6. Put a little of the flour mixture into the bowl with the margarine and sugar. Mix well.
7. Add a little of the milk. Mix. Add more flour, then more milk. Keep mixing very well.
8. Use up the rest of the flour and milk. Mix well.
9. Grease a cupcake tin. Fill each tin half full.
10. Bake at 400° for 15 minutes.
11. Eat with butter and jam.

Carrot Cup Cakes

1. Grate $\frac{3}{4}$ cup of carrots.
2. Mix 6 tablespoons of oil and 6 tablespoons of brown sugar.
3. Add 1 egg. Mix.
4. Add $\frac{1}{2}$ cup whole wheat flour and $\frac{1}{2}$ cup white flour. Mix.
5. Add a pinch of baking soda, $\frac{1}{4}$ teaspoon salt, and $\frac{1}{2}$ teaspoon cinnamon to bowl.
6. Add carrots and 3 tablespoons raisins and 1 tablespoons chopped nuts.
7. Grease cupcake tin, and spoon in batter.
8. Bake in 350° oven for about 30 minutes.

Banana Shake

You will need:

- 3 bananas (sliced)
- 1 cup plus 1 pint of yogurt
- 1 teaspoon of vanilla

What to do:

1. Place sliced bananas into the blender.
2. Add 1 cup of yogurt.
3. Add 1 teaspoon of vanilla.
4. Blend until smooth.
5. Add 1 pint of yogurt.
6. Blend until mixed well.
7. Chill until ready to serve. (Yummy!!!)

Sprouted Wheat Balls

You'll need:

- 1/4 cup sprouted wheat
- 2 T'sp. cream cheese
- 1/4 cup ground peanuts
- 2 T'sp. raisins
- 1/4 cup sesame seeds
- 1 bowl
- 1 mixing spoon

1. Put sprouted wheat, cream cheese, ground peanuts and raisins into the bowl.
2. Mix them all together well.
3. Roll a bit of mixture in your hands to make balls the size of walnuts.
4. Roll each ball in sesame seeds.

FOODS WE CAN GROW

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
3. Students will compare the cost and nutritional value of growing plants themselves with the cost and nutritional value of store-bought plants.	1. Students will visit a garden center to find the cost of growing plants and vegetables. Have students make a list of the supplies they will need: (a) seeds (b) soil (c) stakes (d) container Have students add the total cost of the items they will need. How does the cost relate to the expected yield? What if the yield is less than expected? Discuss that possibility with the class. (K-6) 2. Have students visit a supermarket. They can use the "Trip to a Supermarket" checklist to compare the costs of various vegetables in fresh, canned, and frozen varieties. Choose a variety of vegetables and sources to make the exercise worthwhile. Let students compare these costs with the costs of growing their own. (K-6) 3. Have children bring packages and labels from canned and frozen fruits of vegetables. Compare the ingredients. Make a comparison chart. (K-6) 4. Have students examine all the existing evidence to decide whether fresh, frozen, or canned vegetables are the best buy in terms of cost and nutritional value. (2-6)	

Trip to Supermarket

Which is best to buy. Have children bring in packages or cans with price intact. Fill in chart.

[illegible]

FOODS WE CAN GROW

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
4. Students will investigate the various methods of storage for foods they have grown.	1. Purchase a number of vegetables from the fruit stand or super-market. Treat like fruits or vegetables in the following manner: (a) freeze raw (b) can raw (c) freeze cooked (d) can cooked (e) refrigerate raw (f) refrigerate cooked (g) dry or dehydrate (K-6) 2. After a few days, have a taste-testing party. Compare the taste and texture of the fruits or vegetables after each type of storage. Discuss your findings. (K-6) 3. Students will choose one vegetable for the purposes of investigating the number of ways it can be bought (fresh, frozen, canned, etc.) and cooked (blanched, boiled, fried, etc.). Class will discuss its findings. (K-6)	

FOODS WE CAN GROW

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
5. Students will plan a classroom garden and grow some of the items found in Objective #2.	1. Use Learner Activities #24 and 25 to introduce some of the rules for growing living things in the classroom. Discuss the rules with the class and purchase the necessary items you listed in Objective #3. (4-6)	1. Physical Dimensions of Health, p. 21
	2. For lower grade students use "Exploring Plant Growth." Have children follow directions for sprouting beans and other simple vegetables. Discuss the low/high light chart. (K-3)	2. Nutrition Comes Alive
	3. Students will use all of the information from Activities 1-3 in planning a suitable garden and growing vegetables for their salad.	

SUB-TOPIC: What foods do plant and animals need?

ENABLING OBJECTIVE: The learner is able to list the nutrients that plants and animals need for proper growth.

LEARNER ACTIVITIES

24. As a class project grow a variety of plants from seeds and without fertilizer (plant food). Compare the rates of growth and general health of the plants.
25. Keep the plants in the classroom and have the class compare the growth progress of those without adequate materials for manufacturing food.
 - . Have the class make four signs to be placed on each of the following plants. Each sign should identify the plant and what it is given for growth.

Plant A: in soil, water twice a week in sunlight.

Plant B: in soil, do not water, in sunlight.

Plant C: in soil, water twice a week, keep in the dark.

Plant D: in soil, do not water, keep in the dark.

TEACHER INFORMATION

The class should learn that all living things need food and water for growth and survival. Plants get their food from water, sunlight, air and the soil. If any one of these is missing, the plant cannot grow normally and cannot live.

A lima bean produces a rapidly growing plant. If a clear, plastic glass is used for the container and the bean placed in the soil at the edge, the growth of the sprout can be observed.

Tomato plants also produce rapid results.

Soil is a source of soluble minerals for plants. Tap water usually contains enough minerals so that dramatic results are not seen unless distilled water is used.

Different plants have different needs for nutrients and for water. For example, the cactus can store water, therefore, it can live on the dry desert. Other plants must have water often. A dandelion can grow in almost any kind of soil; a rose must have a more carefully chosen mixture.

Physical Dimensions of Health

Exploring Plant Growth

Let the children test their green thumbs! Here are a few easy and inexpensive ways to watch plant growth in the classroom.

Sprouting

- . Take pea or bean seeds and set them on a wet sponge that is partially submerged in water. Set the container near the light and watch them sprout!
- . You can also sprout potatoes and sweet potatoes by taking a piece of potato and resting it on the surface of water in a glass. Use toothpicks to support the potato. Set the glass near the light and watch it sprout!

Planting

- . Here are some general suggestions on when, how, and what to plant in the classroom.
 - When. During the shorter days of the year, it is more difficult to grow plants indoors. From the beginning of the school year to December and from the end of February to the end of the school year are the most suitable times.
 - How. Use soilless Peat-lite for the growing medium. It can be purchased at most garden supply stores. Put the Peat-lite in large clay pots; or partially fill a plastic trash bag, fold over the excess bag, tape it, turn the bag over on a tray and slit the top of the bag. Now you are ready to plant! Remember, put all plants close to the light, turning them occasionally. Don't overwater or place the young plants near drafts and heaters.
 - What. The list that follows groups fruits and vegetables by lighting requirements. Note: Radishes grow very quickly and are ready to eat in about three to four weeks.
- . Measure and chart the plant growth.

Can Tolerate Low Light

"baby" radishes, "baby" beets, "baby" carrots, Swiss chard, chives, collards, kale, kohlrabi, Bibb lettuce, parsley, New Zealand spinach

Need Good Lighting

dwarf tomatoes, cucumbers, beans, peppers, sweet potatoes

Nutrition Comes Alive

Suggested Teaching Aids and Learning Activities

Vegetative Propagation

A. The garbage garden

1. The carrot hanging basket

Materials: carrots, knife, nail, string and cress, alfalfa or mustard seeds.

- Procedure:
- Cut carrot 2" from the top
 - Carve center out with a knife and bore holes with a nail for hanging with string.
 - Fill center with a soil mix and sow cress, alfalfa and mustard seeds.
 - Keep moist and watch both bottom and top sprout.

2. Growing a Pineapple

Materials: pineapple that is not very ripe, knife, jar or other container

- Procedure:
- Cut off pineapple 1 1/2" to 2" below leaves and put in water.
 - After roots develop, plant in soil mix.

3. Growing a Sweet Potato Vine

Materials: fresh sweet potato, preferably one that is already growing shoots, jar or other container, toothpicks

- Procedure:
- Place the sweet potato in a jar so that 1/3 of it will be above water. Use toothpick to keep it in place.
 - Keep changing the water to keep it fresh, and train the vine in the way you wish.

4. Growing a Bag of Potatoes

Materials: seed potato, 2-gallon plastic garbage bag, soil mix, water

- Procedure: Fill a 2-gallon plastic bag approximately 2/3 full with moistened soil mix and plant a seed potato about 4" deep.

____ New York City Gardening Program

An Indoor Salad Garden

- Materials:
- . seeds of leafy salad vegetables such as different kinds of lettuce, spinach, swiss chard, endive, mustard
 - . egg cartons, 1/2 pint milk cartons, or other container, preferably recycled (Look among the garbage on the streets for wooden carton, baskets--anything with at least a 1/2 gallon capacity and that can provide good drainage.)
 - . soil mix

Procedure: When plants are about 2" to 3" high, transplant to containers, being careful not to disturb the root system. Provide at least 1/2 gallon of mix for each leafy plant. Make sure container has drainage.

- Planning:
- a. Planning--Review once more with the class what a plant needs in order to grow. Then talk about how we can provide plants in a spring garden with these needs.
 - b. Sunlight--Locate the garden in a sunny spot, not in the shade. Choose a suitable spot and watch it during the day to see if it gets at least six hours of direct sun.
 - c. Water--It may be necessary to water the garden during a dry spell. There should be a spigot fire hydrant or water outlet near to the garden site.
 - d. Soil--Plants grow best in a rich, loose soil with good drainage/ If there is no choice as to site, it may be necessary to condition the soil or even to import some topsoil. Before planting, it is vitally important to prepare the soil properly.
 - e. Nutrients--To insure adequate nutrients for your plants, 5-10-10 fertilizer can be added to the soil at the recommended rate of four to five pounds per 100 square feet.
 - f. Suitable Temperature--It is necessary to wait until it is warm enough in the spring before planting. In the New York City area, begin planting spring crops in mid-April. Only plants that like cool weather should be planted in a spring garden i.e., beets, endive, lettuce, onions, parsley, peas, radishes, spinach, swiss chard and turnips.
 - g. Room to grow--Plants should be far enough apart to allow for adequate room to grow. Make a plan on paper before planting.

All About Planting Spring Vegetables

Vegetable		Recommended Varieties for Spring Planting	Length of Row for Average Family Sized Garden/Seed Required	Days to Maturity	Distance Between Rows	Thin To
Beets		Detroit Dark Red, Early Wonder, Firechief, Garnet, Ruby Queen	15' requires 1 oz. seed	55-65 days	12"-18"	2"
Endive		Salad King, Broadleaf Batavian, Green Curled	5' requires 1 pkt.	60-90 days	12"-24"	9"-12"
Lettuce	Head Bibb	Ithaca, Fairton, Buttercrunch, Summer Bibb, Big Boston	25' requires 1 pkt. 10' requires 1 pkt.	45-60 days	12"-18"	4"-6"
	Leaf	Prizehead, B. S. Simpson, Salad Bowl	20' requires 1 pkt.			
Onions		Sweet Spanish, Early Harvest, Ebenezer, Downing Yellow Globe, Beltsville Bunching, White Bunching	20' requires 1/4 lb. of sets	95-120 days	12"-24"	2"-3"
Parsley		Perfection, Moss Curled, Plain Leaf, Banquet, Bravour	2' requires 1 pkt.	85-90 days	12"-20"	3"-6"
Peas		Greater Progress, Progress #9, Sparkle, Early Market, Beagle	40' requires 1/2 lb.	65-85 days	18"-30"	2"-3"

All About Planting Spring Vegetables

Vegetable	Recommended Varieties for Spring Planting	Length of Row for Average Family Sized Garden/Seed Required	Days to Maturity	Distance Between Rows	Thin To
Radish	Champion, Cherry Bells, Comet Sparkler, Scarlet, Knight, China Rose	5' requires 1 pkg.	20-50 days	6"-12"	1"-2"
Spinach	Long Standing Bloomsdale, America, Dark Green Bloomsdale	40' requires 1 oz.	40-65 days	12"-14"	2"-4"
Swiss Chard	Ferdhook Giant, Rhubarb, Lucullus, Large White Rib	10' requires 1 pkt.	55-65 days	18"-24"	4"-8"
Turnips	Purple Top White Globe, Golden Globe, Just Right	10' requires 1 pkt.	45-60 days	15"-18"	1"-3"

FOODS WE CAN GROW

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
6. Students will examine parts of a plant.	1. Use "The Parts of A Plant" to introduce this unit to students. There are a number of activities you can do to introduce and motivate lessons on the various parts of plants.	1. New York City Garden Program
	2. Reproduce and distribute "Edible Plants from Root to Fruit" to your class. Use this repro sheet to show parts of plant and the functions of each of the parts. (3-6)	2. The Doofus Stories, pp. 23-30
	3. Use the "Build-A-Plant" worksheet and allow students to build their own plant out of vegetable material available in most home refrigerators or for free at many neighborhood fruit stores.	

Suggested Teaching Aids and Learning Activities

1. Put up a diagram of a plant with roots, stems and leaves. Ask students to identify each part and ask if they know what the function of each part. Point out the roots, stems and leaves of living plants and trees. Explain that the activities in this unit will demonstrate the function of roots, stems and leaves.

2. Conducting Tissues in Celery Stems

Materials: White stalks of celery, water, glasses of jars, ink or food coloring to color water

Procedure: Put coloring in water to make the water red or blue, or maybe make one glass of red water and one glass of blue water. Leave one glass of water clear. Make a new cut across the bottom end of the celery stem and place the stalks in the water. Leave in bright sunshine for a few hours and watch for a change in the leaves. Cut a cross section of the stalks to see that the "strings" are the conducting tissues.

3. The root view box: Though seldom seen, the roots are a very important part of plants. The root view box affords us the opportunity to watch what happens below ground. A root view box can be made from a half gallon milk carton. Cut out a "window" on one side of the milk carton, leaving a 1/2" border on all sides. Only cut the window on the sides and bottom, and fold along the top side to make a flap. Cover the window with plastic or saran wrap, gluing and taping it very securely on the outside. Cut some drainage holes in the bottom. Fill the root view box with soil and plant seeds near the window side of the carton. Beans, corn and radishes germinate quickly and therefore, would be good seeds to plant. Give the soil a thorough watering and check daily to see that soil is moist. Keep the flap taped shut since roots tend to grow away from light. Only lift the flap when viewing the roots. Keep the box tilted so that the roots will grow into the window.

Where Does a Seed Come From?

Making a model of a flower.

Materials: modeling clay, toothpicks, colored paper, scissors

Procedure:

- a. roll a clay cylinder about 2" long and stand on one end
- b. push a toothpick into the other end
- c. using green paper, cut out a 6pointed star for the sepals
- d. cut out a 12 pointed star for the petals
- e. shape a bowling pin for the pistil and press over the toothpick
- f. make a row of toothpicks around the pistil and put a small dot of clay on the top of each

Using the model, go over the parts of the flower. Compare the model to a real flower such as a tulip or lily. Explain pollination--the transfer of pollen from anther to stigma (sometimes aided by insects). Look for the pollen on the anthers of the real flower. Point out where the seeds develop.



A. A Seed Collection

Materials: paper plates, various kinds of seeds (e.g., beans, corn, sunflower seed, peas, nuts, different weed and tree seeds, etc., also a few items that are not seeds (e.g., paper clips, stones, crayons). Also, various kinds of fruits and vegetables, such as tomatoes, peppers, pumpkins, apples, peaches, oranges.

Procedure: Ask the class if everything on their plates is a seed, if not, which items are not seeds. What makes a seed a seed? Ask which seeds are used for food; which seeds might be from trees. Cut open different kinds of fruits and vegetables. Find the seeds. How many are there? Do different fruits have different numbers of seeds?

B. A Seed Collecting Trip

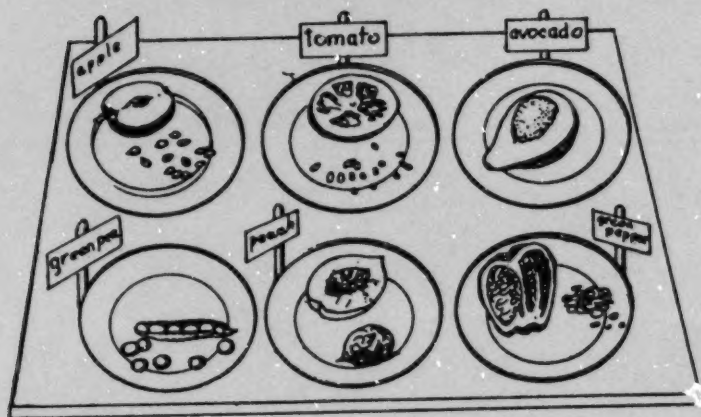
Go outside as a group to collect different kinds of seeds--all weeds and trees produce seeds. Try to find them--they are abundant, even when the leaves are off the trees. Tell students to keep their eyes open for seeds to bring in for the seed collection.

C. Seeds Adapted for Dispersal

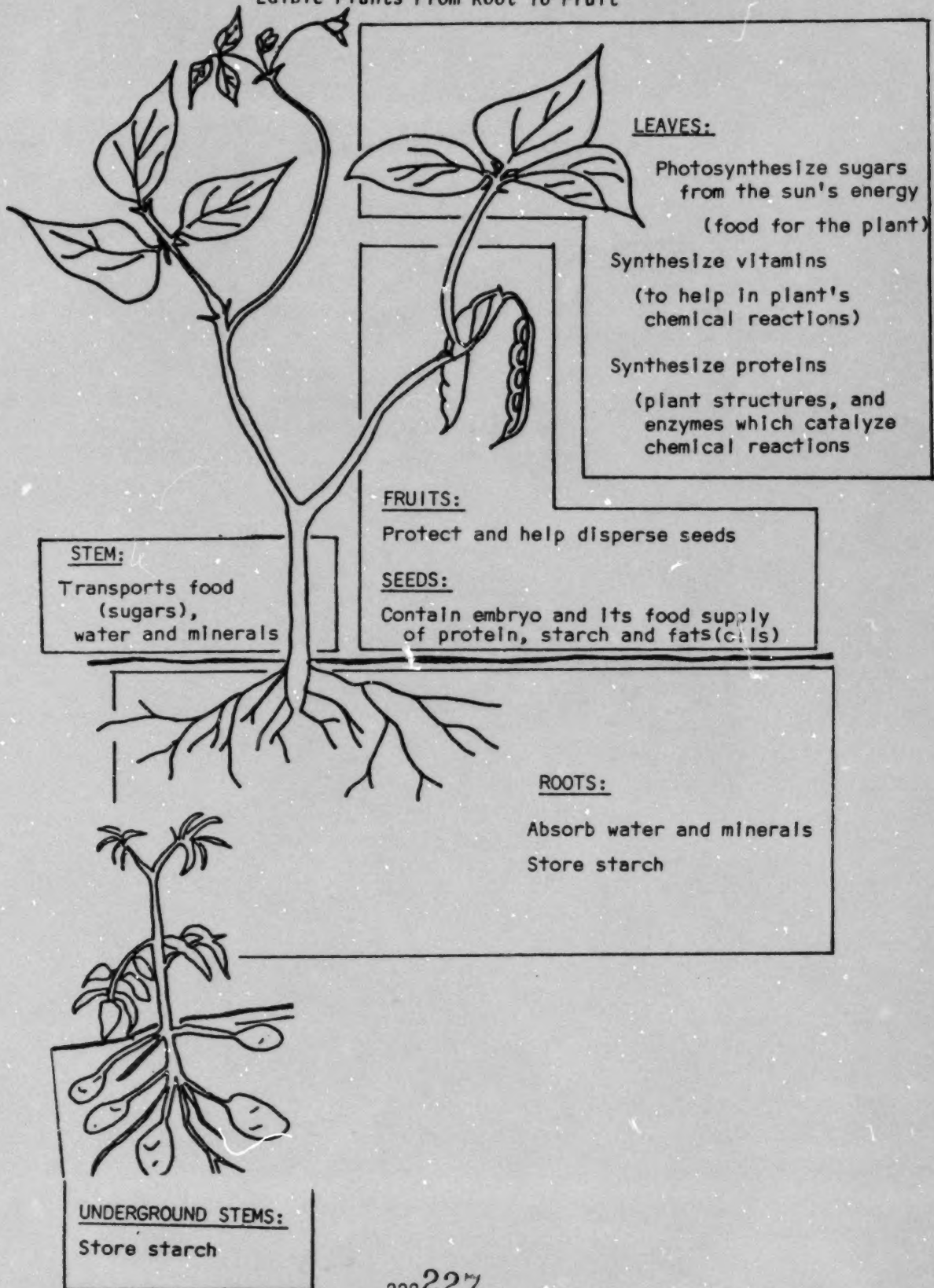
Materials: Have examples of seeds demonstrating different kinds of adaptations.

Procedure: Ask students if they can guess how different kinds of seeds are dispersed--by wind, animals, or water. Ask why seeds must be dispersed.

- D. Start a seed display in your classroom by gluing seeds to brown paper. Seeds could be categorized into those used for food, those from trees, etc. Seeds from different kinds of fruits and vegetables could be labelled. Seeds dispersed by wind and those dispersed by animals could be grouped together and labelled.
- E. Send for some seed catalogues. You may want to order some herb seeds to grow in your classroom and outside this coming spring.



Edible Plants From Root To Fruit



Edible Plants: From Root To Fruit

Special Adaptations of Plant Parts That Make Them Good Food Sources

By Carol Bershad

FRUITS: Biological Bribery May Get You Somewhere!

Some plants have sweet and fleshy fruits that attract birds and mammals who disperse the seeds far from the parent plant. These fruits contain stored carbohydrates (starches) that turn to tasty sugars as the fruit ripens. Some well-known examples are apples, cherries, and peaches.

Many seeds need a trip through a digestive tract in order to weaken their tough seed coats and prepare them for germination. As a result of a journey through an animal, seeds are deposited in a spot away from parental competition and given a handy package of fertilizer as a going-away present.

SEEDS: Like Taking Protein From a Baby

Each seed contains a plant embryo with a built-in food supply of proteins, oils, and starches. These nutrients are present in sufficient quantities to nourish the seedling until it can grow leaves and produce its own food. Seeds like legumes, nuts, and grains are especially important plant sources of protein and concentrated sources of energy, since the oils they contain provide twice the number of calories of energy per gram as an equal amount of protein or carbohydrate.

The lifestyle of plants affects their seed size and thus their importance as a food source. Grasses like oats, wheat, and rye are annuals - they live for only one year, produce relatively large seeds (grains), and die.

Grasses like the Kentucky blue grass or crab grass of your front lawn are perennials. They live for several years and survive the winters by storing their food below ground in roots and underground stems, and by producing seeds. Thus, they do not put all their nutrients into one basket - the seed - as the annual grasses do. As perennials do not depend entirely on their seeds for survival, their seeds are smaller than those of annuals, and are not as worthwhile a food source for man. (Some mice, however, do appreciate them.)

ROOTS: Nutrition Worth Rooting For

Plant lifestyles also affect the value of roots as a food source. Plants like carrots, turnips, and beets live for only two years and are known as biennials. They produce stems and leaves during the first year, but do not flower and go to seed until their second year. Thus, at the end of the first year they need to store their carbohydrates below ground in order to get a head start on flower and seed production in their second year. These carbohydrates are stored as starches in large tap roots and make a tasty food supply for those who dig them.

LEAVES: "Sol" Music

Green leaves convert solar energy into carbohydrates, the plant's food supply. Most of the carbohydrates produced by leaves are either used immediately in the release of energy for plant functions, or are sent to the fruits, seeds, and roots for storage. One tasty apple, for example, may require the imported sugars from as many as 15 to 35 leaves, depending on the variety of apple.

Some carbohydrates may be changed into proteins to build plant structures and to serve as enzymes in biochemical processes. Leafy green vegetables are a minor source of protein and a significant source of the vitamins and minerals involved in the photosynthetic and metabolic processes that produce and release energy for the plant.

STEMS: Delivering the Goods

Stems are vital food thoroughfares for carbohydrates on their way elsewhere in the plant. Although they are usually not food storage areas, one particularly well-known plant--sugar cane--does have stems with a high concentration of carbohydrates. The woody stems of maple trees may also be tapped in early spring for the sugary syrup that heads upward to ready the plant for its spring surge of growth.

UNDERGROUND STEMS: Keeping It To Themselves

In some cases, enlarged underground stems do serve as food storage areas. Several examples which are commonly mistaken for roots are ginger and potatoes.

The staple plant food eaten around the world are grains, legumes, and root crops. Grains and legumes are the better nutrient bargains per volume, but some folks have no choice. Leaves, roots, stems, and fruits contain a great deal of water per amount of nutrient. Fruits and leaves, though, are important sources of other nutrients such as vitamins and minerals.

Plant Parts

Name a vegetable from LEAVES

Name a STEM vegetable

Name a vegetable that is
really a FRUIT

Name a ROOT vegetable

Name a vegetable that is
a SEED

Draw a line from each floor to the plant part.
it comes from.

Draw a Make-Believe Plant

Think of these plants and try to use their parts as you're building your plant.

Carrot
Onion
Rhubarb
Tomato

Cucumber
Radish
Turnip

Cauliflower
Celery
Avocado

Green Pepper
Peach
Pineapple

Lima Bean
Orange
Artichoke

Lettuce
Potato
Beet

SEEDS

FRUIT

FLOWER

LEAVES

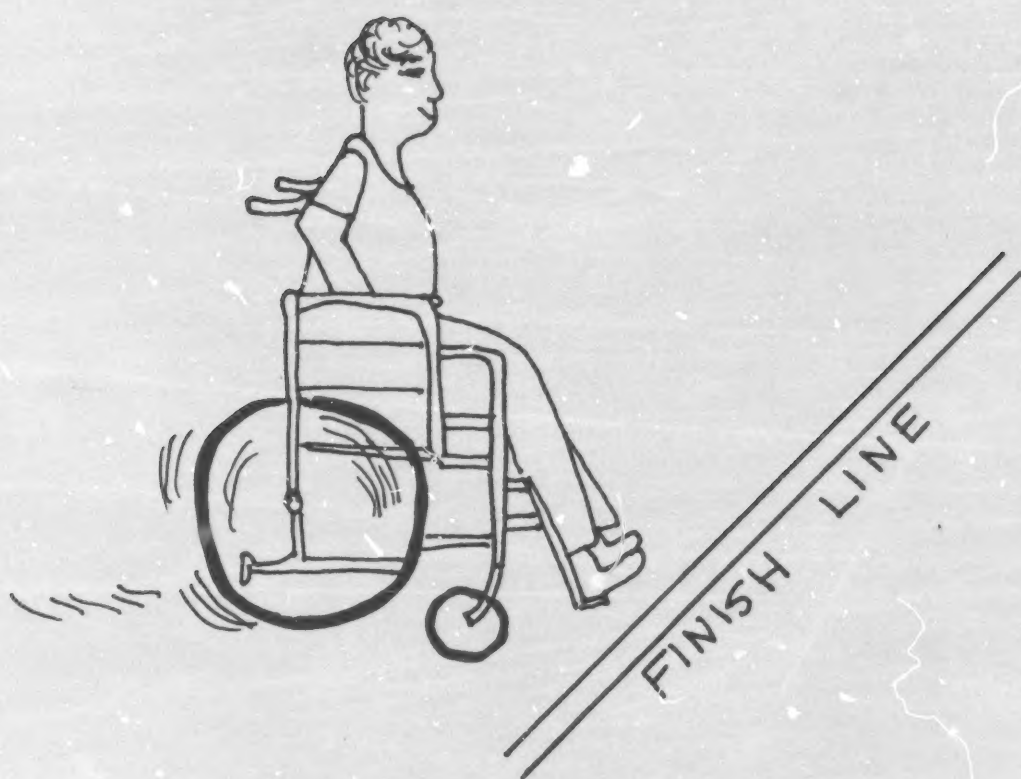
STEM

ROOTS

BUILD-A-PLANT

1. Build your own completely original and edible plant out of a collection of different plant foods you find in the refrigerator and cupboards at home.
2. Arrange the plant parts on a large piece of paper as they would appear in a real plant. Draw a soil line to show which parts grow above and below the ground.
3. Include at least one sample of each part--roots, stems, leaves, flowers, fruits and seeds.
4. Draw or photograph your plant. Compare it with other new plant inventions in your class.
5. What would you name your new plant invention?

Foods
Athletes
and
Physically Active People
Eat



FOODS ATHLETES AND PHYSICALLY ACTIVE PEOPLE EAT

Students in special education participate in a wide range of physical activities. They participate in regular physical education classes alongside regular education students as well as in street games such as basketball, stick ball, and street hockey, often in events with students in regular education classes.

Many activities on the school level, however, must be modified to fit the needs of persons with handicapping conditions. The New York State Special Olympics, in which many students in New York City special education classes participate, provides a natural setting for many of the activities in this theme. It is important that students in special education recognize their potential for physical activity and develop the skills necessary to plan and carry out a lifetime physical education program.

The performance objectives for this theme are as follows:

- . Students will understand the relationships between foods they eat, growth, and development.
- . Students will recognize the importance of physical exercise and develop an exercise plan to meet their personal needs.
- . Students will interview a person who maintains a regular exercise schedule to ascertain his/her schedule and to find how the diet is related to his/her activities.
- . Students will plan a diet for an athlete.
- . Students will use the diet they have developed as a model for planning what they personally should eat for good health and proper nutrition as an active person.
- . Students will plan and prepare a bulletin board detailing the activities of well-known athletes as well as those participating in the Special Olympics. This bulletin board should focus on the nutritional and physical fitness activities of the athletes.
- . Students who are wheelchair-bound will understand how they can attain reasonable fitness levels.

FOODS ATHLETES AND PHYSICALLY ACTIVE PEOPLE EAT

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
1. Students will understand the relationships between foods they eat, growth, and development.	1. Use Learner Activities #30-34 to introduce the concept that food provides energy for activity and growth. (2-6)	1. Nutrition Education
	2. Use Learner Activities 35-39 as a motivator for a lesson on why the body needs food. (K-4)	2. Nutrition Education
	3. Reinforce the skills/concepts learned in the previous two activities with the "Doofus Arrives" worksheet. For lower grade students (K-2), this worksheet can be used in place of Learner Activities 35-39 in introducing the basic concepts.	3. Doofus Stories
	4. Use the "Let's Go Exploring" activities to teach students that foods contain nutrients which are necessary for growth and life activities.	4. Let's Go Exploring
	5. Discuss with students the concept that active people need more nutrients than those who are not active. Why do active people need special diets? Do active people have to do anything else besides eat the right things? Is exercise important for good health?	

TOPIC: The Uses of Food

SUB-TOPIC: What foods are needed for growth?

TERMINAL OBJECTIVE: To appreciate the relationships between foods eaten and health, growth, and development and energy needs.

ENABLING OBJECTIVE: The learner is able to list several foods necessary for proper growth.

LEARNER ACTIVITIES

30. Ask these questions:

- . Are all boys and girls who are the same age the same size? Why?
- . Are all adults the same size? Why?
- . What factors influence how well one grows?

31. Using shelf paper, have each pupil draw an outline of a classmate until an outline for each pupil is made. Tape these outlines on the walls around the room (or in the hall). Be sure that each pupil's name is on the outline.

This can be repeated two or three months later to see if the children are growing.

32. Have each pupil keep a record of height and weight at two-week intervals. After several weeks, have the pupils make a line graph of their growth. Take the average height and weight of the class at the beginning and at two-week intervals. Graph the growth of the class.

- . Is each child growing?
- . Are some growing faster than others?
- . Is the class growing?
- . How does each pupil's growth compare with that of the class?

33. Construct a make-believe person using styrofoam blocks held together with toothpicks, or use a bulletin board display built with discrete units of colored paper.

TEACHER INFORMATION

It is important that the learners understand that all living things need food for growth. Not only must people have enough food, they also must have the right kinds of food.

Some key concepts and understandings that the learners should develop are:

- . Each person grows differently.
- . All people need to eat food in order to grow as they should.
- . Every person has his or her own pattern for growth; how much and how fast.
- . A boy or girl whose mother and father are both short will probably also be short. The same is true for tallness.
- . One needs to be healthy to grow as he or she should.
- . To maintain health it is important to get enough rest and exercise and to eat the right kinds of food.

Obtain copies of Growth Record from the Office of the Dairy Council.

- . Good food will help one to grow to the size he or she was meant to be.
- . Differences in size of people are normal.
- . Everyone should grow, but now everybody will be the same size. (Of course, everyone stops growing at maturity).
- . Every part of one's body depends upon good food to grow and to be healthy.

34. Using a microscope, have the children look at a slide of real cells. Discuss what the children have seen.

- . How does growth take place?
- . How are worn out cells replaced?
- . What must be done if a "cell" of the make-believe person becomes damaged.
- . How does this relate to the healing of a cut in a person?
- . What supplies the essential materials for making new cells?

If more than one microscope is available, mount several different kinds of cells so that the learners can see there are different shaped cells in the body. Discuss the functions of cells and how they are the building blocks of the body.

Show how the make-believe person can be made to grow bigger by adding more "cells" and by replacing existing "cells" with larger ones.

Food supplies the materials necessary for making new cells.

Vocabulary:

cell
exercise
graph
heal

healthy
microscope
rest
size

SUB TOPIC: Why is energy-producing
food necessary?

ENABLING OBJECTIVE: The learner is able to list several daily activities
that require the use of energy.

LEARNER ACTIVITIES

35. Show a picture of a train to the class; show a picture of a car; show children eating, and so on.

- . What is each picture showing?
- . What happens when a car runs out of gas?
- . What happens if children do not eat foods that give energy?

36. Have the children form a long line to become a train. Go around the room.

- . What makes the train go?
- . What happens when the train runs out of fuel?
- . What kinds of fuel do trains use? Where do they get their fuel?

Have the "train" stop. Pretend it is being refueled.

- . What can the train do now that is it refueled?

37. Repeat the same activity except now each child becomes a car.

- . What kind of fuel does a car use?
- . Where does it get its fuel?
- . Why is fuel important for the car?

38. Repeat the same activity except the children are themselves.

- . What makes people go?
 - . Where do people get their fuel?
 - . Where does the heat for the body come from?
 - . Where does the body get its energy?
- Discuss stored energy.

TEACHER INFORMATION

Obtain pictures of a train, car, children eating, children playing, etc.

Food is the fuel for the body. It is necessary to produce the energy needed for all of life's activities.

List the pupils' comments on the chalkboard.

- . Ask the pupils what they like to do best.
What activities require energy?
- . Where do people get their energy?
- . How is energy replaced?
- . What are some foods that are high in energy?

Food produces heat to maintain body temperature. Food acts as the fuel for the body, but like any fuel that is burned, it is used up and must be constantly supplied if our bodies are to function properly. Work, play and other activities use up the energy in the body. When this occurs, a person gets hungry and needs to eat food to restore the needed energy. If one does not eat enough energy foods, the body will use its supply of stored energy.

Summarize by showing pictures of children playing and children who are tired. Discuss what helps children play and what makes people tired.

Show pictures of children eating.

Note: The children should also recognize that one may get tired or look tired for reasons other than the lack of energy food.

39. Use pictures to show different kinds of fuel being used to produce heat. Examples are a gas stove, a wood fire, coal furnace, the sun.

Discuss energy and its importance to people.

- . Where does much of our energy come from?
- . How do we conserve energy?
- . How can we conserve body energy?
Is it important to conserve food energy? Why?
- . Why does the body need energy?

Show that the body needs energy to keep it warm. Have each pupil take their own body temperature in the room. If it is cold outside, have them take their temperature outside the room. Show that the pupil's body temperature inside the body remains the same even though the air outside is cold.

Discuss energy foods; carbohydrates and fat as our primary source of energy. Protein may also be used by the body for energy but its primary use should be for growth and repair.

Pure fat yields 9 kilocalories per gram while pure carbohydrates and protein yield 4 kilocalories per gram.

Compare the body's store energy with a spring in a clock that must be wound up. When the spring is wound, the clock can run for hours (sometimes days), but when it runs down it must be wound up again. If it is wound before it runs down, it can continue to run. It doesn't have to stop.

Vocabulary:

body
conserve
fuel
heat
hungry

play
refuel
stored
temperature
work

1. DOOFUS ARRIVES

Specific Concepts/Skills:

1. Bodies differ in height, weight, and proportions.
2. Growth occurs with age. People grow at different rates.
3. Living things require food and water in order to grow.
4. Food gives us energy. Extra food energy is stored as fat.
5. Fitness includes:
 - a. proper food
 - b. sufficient exercise
 - c. enough sleep

New Vocabulary:

weight

height

energy

growth

fat

Notes to the teacher:

This section introduces the Doofus character and uses his questions to present the general concepts of growth, energy and fitness. Students first become familiar with the underlying theme of variety--the fact that differences in size and weight are normal, and that growth proceeds at different rates. The fuel analogy may be a helpful tool to explain energy: a car needs gas, a person needs food.

Taking off from the story line, you may wish to expand on fitness ideas--why Doofus might have trouble flying, how nutrition is one element of fitness, etc. Additional topics to consider include metric measurements, comparisons of two or more weights, the importance of sleep and the diets of other animals. Point out that Doofus is not an ordinary bird and is following a human diet in this story.

Activities:

1. Children and the teacher bring in their baby pictures. Everyone tries to guess "who's who" and puts a list of guesses in a special box.
2. Measure children's heights and weights, keeping in mind that children may be sensitive to comparisons with each other. Use wall chart for measurements and record results for comparison later in the year. Use the metric system. It may be useful to set up a fitness folder for each child at this time.
3. Fill a grocery bag with 7 1/2 lbs. of potatoes (the average weight of babies) and pass it around to the children. Have them find out their own weights as babies and subtract these amounts from their present weights to see how many pounds they have gained since they were born.

____ The Doofus Stories

4. Children trace outlines of each other on brown paper. Redo 6 months later for comparison. Mark off birth height from bottom. Children trace outline of their own hands and parents' hands over theirs.
5. Children plant bean seeds in cottage cheese containers containing potting soil. Watch growth pattern. Draw pictures and measure growth of the bean plants each day. Keep track on the worksheet.
6. Children act out human activities which require energy. Mark off a magic box with tape in center of a circle of children. Each child steps inside and shows the activity of his/her choice with body motion only, no words. Other children guess. Actor shakes head "yes" or "no". Once activity is known, class decides how much energy it takes, a little, medium amount or lots.
7. Children discuss a particular time when they didn't eat--when they were hungry and had to wait for a meal. Discuss feelings, both physical and emotional (i.e., cranky, angry, tired, etc.), then role-play.
8. Burn a small piece of peanut to show children that food contains energy. Attach needle to cork base. Put small piece of peanut or other nut on end of needle. Light with match. Be sure to have metal pan underneath and to use a small piece of peanut, not the whole nut, as it will burn too much.
9. Have each child "pinch an inch" of skin at his/her waist or on back between the shoulders to see where fat is in the body. Discuss the fact that fat is stored food energy and a protective layer for the body.

Let's Go Exploring

Goodies in Foods

- . Put on "explorer's hat"!
- . Have MUNCH introduce the concept that there are "goodies" or nutrients in foods, which we need in order to grow inside and out and to be healthy. Just as there are important things in your body that you can't see, there are also nutrients in foods that you can't see. But, they are there, and they are very important! To help the children understand this idea, here are some suggestions:
 - Do all foods taste the same? Can you see taste? Of course not! But foods taste different from each other because they contain different things we can't see, but we can taste!
 - Take a clear glass and fill it with water. Then add two tablespoons of sugar or salt. Ask the children if they can see the added sugar or salt in the water. The answer, of course, is no; but does that mean it's not there?
- . Have MUNCH explain that there are many different kinds of nutrients that we need to grow and feel great. Each one does something different for our body. Different foods contain different kinds and different amounts of nutrients. That is why we should eat many different kinds of foods each day to get all the nutrients we need for health and growth.

___ Let's Go Exploring

Let's Go Exploring

I'm Growing Too!

- Sing the "Munch with MUNCH" song!
- Have MUNCH ask, "What things on your body can you see grow?" Make sure the children remember height, hair, fingernails and toenails, and new teeth! If possible, look at hair and fingernails under a microscope.
- Let MUNCH explain that we all grow taller at different times and that we grow different amounts. Some people never grow as tall as others because perhaps their parents or relatives weren't very tall. Stress that eating good foods each day can help you grow as tall as you are supposed to.
- Have MUNCH review ideas on growth from the introductory activity of this section.

Growth is also

- getting bigger and stronger,
- the development of different body parts,
- the daily growth and repair of various important body parts, inside and out.

• MUNCH can then ask, "When you grow, something else happens that you can measure...what is it?" (You gain weight!) Let the children guess, "Why do you gain weight?" (There is more of you! Bones grow bigger and longer, your organs enlarge, your head expands, etc.)

- Have the children weigh themselves and measure their heights. Make a class chart of everyone's height and weight on a big piece of paper. Or, ask the school nurse to help the children plot their growth on a standardized growth chart.
- Chart changes in growth every 2 or 3 months.

I'm Growing Too!

Name	September	December	March	June
John Adams	50 inches			
	60 pounds			
Maria Perez				

A Fun Idea!

Pantomime being tall! Make stilts out of coffee cans. Each child should bring in two coffee cans and punch two holes on either side of the bottom with a can opener. Thread string through the holes and then stand on the cans and walk while holding the strings!

Let's Go Exploring

What Happens When I Grow?

. MUNCH has explained that one way we grow is in height and weight. But what is happening inside our bodies that makes this happen? Have MUNCH ask the children. Use MUNCH to help the children understand:

- When we grow taller, our bones are growing longer and longer. Show pictures of the body skeleton.
- We gain weight because we have more bones and because other important things are happening. Our muscles are growing bigger and longer; many important organs, such as the heart and liver, are growing larger; and we are constantly growing more skin and tissue to cover these growing bones and organs. All of this adds body weight! Show pictures of important body organs.

. On butcher paper, have the children trace each other's bodies, working in pairs. Have each child draw in his or her face.

Cut out tracings and save them. Later in the year, have the students repeat the activity and compare the tracings. Did they grow? Did all parts of their bodies grow at the same rate? Which bones grew the most?



Let's Go Exploring

Hey! That's Me!*

- . Put on "explorer's hat"!

"Hey! That's Me!"

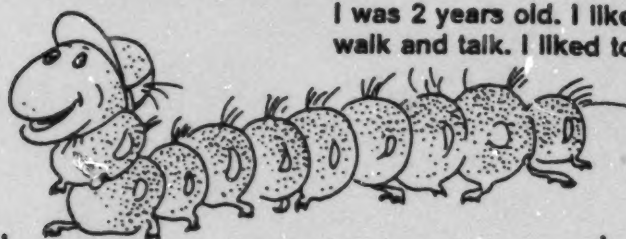
- . Ask the children to bring in baby pictures of themselves, as well as other pictures that were taken as they grew older.

If the children don't have baby pictures available, perhaps they could cut pictures of children from magazines to represent themselves.



I was a baby. I could not talk or walk. I slept a lot.

- . Have each child select about three pictures showing different ages and write a statement or two about how they have changed and grown.
- . Start a scrapbook! Have the children paste or tape their pictures and accompanying statements on a piece of paper.



I was 2 years old. I liked to walk and talk. I liked to eat.



I am 7 years old. I like to play and run. I am longer. I eat snacks after school.

Let's Go Exploring

Protein Helps Me Grow

. Put on "explorer's hat"!

- . One important nutrient for growth is protein. Have MUNCH ask the children, "Have you ever heard of the nutrient goody called protein? Do you know what protein does for your body?" Let the children answer and have MUNCH help explain what protein does:

- Protein helps build and maintain muscle. What does muscle do? It helps you to be strong and it helps you move. To demonstrate this, give the children a small rubber band and ask them to pretend it is a muscle. Ask them to insert their thumb and forefinger inside the rubber band. Now ask them to pretend that their fingers are nothing but bones. Muscle helps bones move. Ask the children to stretch the rubber band as far as they can by separating their thumb and forefinger as much as possible. Can you feel the pull? Move your fingers back and forth to feel it. That's how muscle works to help you move the bones in your legs, the bones in your arms, back, neck, face, fingers, toes, etc.

Your heart is also a muscle, which pumps blood containing the nutrients from the foods you eat to all body parts. What happens when you pump a bicycle? (It moves, so does blood!) Lie on your back and pretend to pump a bicycle! Now, feel your heart beating.

Hustle some muscle! Muscle is needed to move every body part, and it takes fewer muscles to smile than it does to frown! Have the children pantomime or do their favorite playtime activities that make them smile! Discuss the various motions and what muscles are being used.

Example: Swinging a baseball bat needs hand muscles to hold bat, arm muscles to support bat and swing, and back and leg muscles to twist while swinging!

Let's Go Exploring

What Foods Contain Protein?

- . Put on "explorer's hat"!
- . Protein is found in many animal foods and some plant foods. Good sources of protein are--

Animal Foods

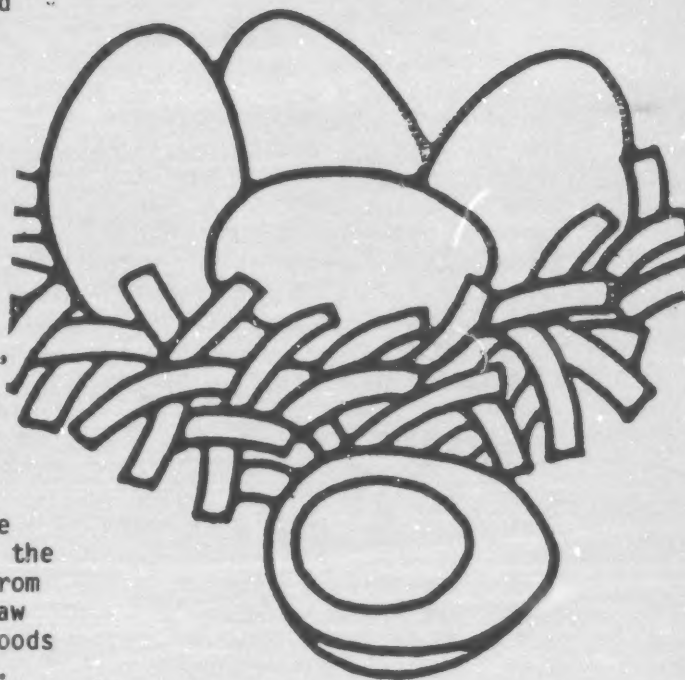
meats
poultry
eggs
fish and shellfish
dairy products: milk, cheese,
yogurt, ice cream

Plant Foods

legumes: dried peas and beans,
lentils, peanuts, and legume
products, such as soybean curd
(tofu)

- . Write this list on the board (use food pictures if possible). Ask the children to name some examples from each category. Then they can draw some of their favorite protein foods and add them to their scrapbooks.

Discuss. Then ask the children to write a short complete sentence or two about their favorite protein food in their scrapbooks!



Let's Go Exploring

Calcium helps Me Grow*

. Put on "explorer's hat"!

. Another important nutrient for growth is calcium. Have MUNCH ask the children, "Have you ever heard of the nutrient goody called calcium? Do you know what calcium does for your body?" Let the children answer and have MUNCH help to explain what calcium does.

- Calcium helps build your bones and teeth.

- Calcium helps keep your bones and teeth strong!

. To help the children understand how calcium functions, try doing this--

- Ask the children to take a piece of scrap paper and pretend that it is a bone. Then have the children take a paper punch and make holes in the paper. Tell the children that the pieces punched out are calcium. The remaining piece of paper is like a bone without enough calcium to be strong. When the calcium (the punched-out pieces) is put back into the bone (the paper with holes), the bone becomes strong again.

- Take a chicken bone and place it in a glass filled with vinegar. After a few days, remove the bone and see what happens! The bone has become soft and bends because the vinegar leached the calcium out of the bone!

. Have the children pretend that they have soft bones...pretty hard to walk, isn't it! Now have the children pretend they have no teeth. It would be pretty hard to chew! Discuss how nice healthy teeth can also make you have a better physical appearance.

. Discuss the importance of taking good care of your teeth.

Let's Go Exploring

What Foods Contain Calcium?

- . Put on "explorer's hat"!

- . Calcium is found in some animal foods and in some plant foods. Good sources of calcium are:

Animal Foods

dairy products: milk, cheese,
yogurt, ice cream
fish and shellfish

Plant Foods

broccoli
greens: collards, turnip, mustard
kale

- . Write this list on the board (Use pictures if possible). Ask the children to copy it or write down some of their favorite foods in these categories. Add it to their scrapbooks.
- . Point out that the animal foods that are good sources of calcium are also good sources of protein.

- . Discuss. Then have the children write a short complete sentence or two about their favorite calcium food.

- . Sing this song to the tune of "Pop Goes the Weasel."

I had a friend named Wobbly Will,
He wouldn't eat milk or cheese,
and when he stood to try to walk
He dropped to his knees!

Oh, my friend Will, he couldn't
chew
His teeth were soft as jelly,
And every food he tried to eat,
Just dropped into his belly!

Let's Go Exploring

What Hurts My Teeth?*

.Put on "explorer's hat":

- . MUNCH has helped the children understand that calcium is good for teeth, but some foods can hurt teeth! Have MUNCH ask, "Do you know of any foods that can hurt your teeth?" The answer, of course, is sugary foods.
- . Have MUNCH explain how sugar is eaten by tiny bacteria (germs we can't even see) on the tooth surface. When the germs eat sugar, they make acid....and acid makes cavities. Brushing teeth can remove the sugar and the germs, but it is best not to eat sugary foods too often. Besides, most sugary foods don't have many nutrient goodies in them. Have the children name foods that are sugary.
- . To illustrate the decay process, here are a few demonstrations you might try:
 - Take a glass of water, tell the children it is full of tooth germs. Then drop a "Fizzy" or "Alka Selzer" into the water. Have the children pretend that the "Fizzy" is a tooth all full of sugar. What happens to the tooth? It dissolves just like a real tooth surface when you eat too many sugary foods!
 - Put a baby tooth in a glass of cola for a few days. What happens to it?
 - Get some "disclosing" tablets from a local pharmacy. These little red tablets, when chewed, show where food and germs are on your teeth by coloring those areas a bright purple. The children can then try to brush these areas clean with a toothbrush. This is an excellent method of learning how to brush properly, but check with parents first because the children's mouths will stay purple for a day or so! Ask your school nurse for assistance.
- . Ask the children to write or draw some of their favorite snacks. Put an "X" by those that are sugary. Which of these foods do you see advertised on TV? Discuss

Let's Go Exploring

What Does Protein Do?

- . Have MUNCH ask, "What does protein do for our bodies?" The children can say or pantomime the answers.
- . Draw a line across the floor. Ask the children to cross the line in as many ways that they can think of, using different muscles.

What Does Calcium Do?

- . Have MUNCH ask, "What does calcium do for our bodies? The children can say or pantomime the answer. "What would it be like if you didn't have enough calcium?" Pantomime.
- . On the board, write the following:
 - Calcium helps to build bones.
(true)
 - Calcium helps you to see better.
(false)
 - Calcium helps to make strong teeth.
(true)
 - Calcium helps to build muscle.
(false)
 - Calcium helps to heal cuts.
(false)
- Ask the class to vote on which things calcium does.

What Foods Have Protein? Calcium?

- . Play store. Set up a store with food pictures or wrappers. Ask the children to buy or select two protein or calcium foods.

Feed MUNCH. Using pictures of foods, ask the children to feed MUNCH only those foods that have protein and/or calcium. MUNCH always explains to the children why they are correct or incorrect.

- . Have a relay! Divide the class into two or more teams. Give each team some pictures of foods, both "good for my teeth" and "bad for my teeth" foods. To play, they must place the "good for my teeth" foods in one pile and the "bad for my teeth" foods in another. First team to finish wins! Are all the foods in the correct piles?

Putting It All Together!

FOODS ATHLETES AND PHYSICALLY ACTIVE PEOPLE EAT

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
2. Students will recognize the importance of physical exercise and develop an exercise plan to meet their personal needs.	1. Use Learner Activity #1 to introduce the importance of physical fitness. (4-6) 2. Teachers of students in Grades K-3 should modify Learner Activity 1 for use in their classes. This can be done by developing rexo masters and board activities around the basic concept that physical fitness, as well as nutrition, is important for good health. (K-3) 3. Use the "How Fit Are You" worksheet as a self-rating activity for your students. Allow them to rate themselves and then discuss their ratings with the class. (3-6) 4. The four activities worksheets presented here are physical fitness activities designed for elementary school students. Use those exercises you deem best for your class or allow students to develop their own exercise program. (K-6) 5. Use the fitness chart as an individualized checklist for students to keep track of their progress in the exercised outlined in Activity #4. (K-6) 6. Have students discuss how physical fitness and nutrition go hand-in-hand for good health. (K-6)	1. Nutrition Education Grades 10-12, p. 32 3. Keeping Fit, p.8 4. Choosy Chewer

How Fit Are You?

How physically fit are you? Check off the sentence in each pair that tells about you.

1. ☐ I usually have lots of pep and energy.
☐ I get tired easily.
2. ☐ I am in pretty good health.
☐ I get sick a lot.
3. ☐ I am strong enough to carry or lift most things.
☐ I usually have trouble lifting or carrying heavy things.
4. ☐ I can do physical things like climbing or running without getting out of breath.
☐ I am usually out of breath after doing something physical like climbing or running.
5. ☐ I can bend or stretch my body with little trouble.
☐ It usually hurts when I bend or stretch my body.
6. ☐ I'm just the right weight.
☐ I should lose or gain some weight.

How many of the first sentences in each pair did you check off? _____

If you checked off all six, you are in excellent shape and physically fit. If you checked off at least three, you are in fair shape.

How physically fit are you? Check off the sentence below that tells about you.

- ☐ I am in poor shape.
- ☐ I am in fair shape.
- ☐ I am in good shape.
- ☐ I am in excellent shape.

____ Nutrition Education

TOPIC: Nutrition and Physical Fitness

SUB-TOPIC: Maintaining Physical Fitness

TERMINAL OBJECTIVE: To conclude that establishing and maintaining good exercise and nutrition habits as a lifelong goal will maintain physical fitness and wellness.

ENABLING OBJECTIVE: To recognize that a nutritionally adequate diet and exercise are major contributing factors to physical fitness and health.

LEARNER ACTIVITIES

1. Have students answer the following questions:

- . What is physical fitness?
- . What factors in our modern society contribute to poor physical fitness?
- . What are considered to be some of the diseases of a "civilized," industrialized society?
- . How could exercise contribute to proper nutrition?
- . At what age(s) in a person's life is physical fitness important?
- . How does exercise and nutrition promote physical fitness and wellness?
- . Comment on this statement: If a person needs and takes in 2500 calories a day, he is properly nourished.

Discuss the above questions and answers:

- . Did any misconceptions or disagreements arise during the discussion?
- . How many believe the above factors influence their lives and habits?

TEACHER INFORMATION

In our industrialized society, many individuals have become more sedentary. A decline in physical activities and an overabundant food supply have contributed to reduced physical fitness.

Exercise may increase a person's need for calories. It is difficult to assure nutritional adequacy when the daily caloric intake is below 2,000. Essential nutrients, especially vitamins and minerals, are found in many different foods but in small amounts.

An adequate amount of nutrients and exercise protects against diseases (heart attack, cancer, diabetes, obesity, etc.).

(An excellent reference booklet for this topic, including information, current articles and almost 100 annotations in the bibliography, is "Nutrition and Physical Fitness: A Review," The University of the State of New York, State Education Department, Educational Programs and Studies Information Service-EPSIS, 1980.)

Leaders and Followers

Fitness

Puddles says:

Here's a way for everyone to share an exercise. Try "Leaders and Followers." Use music or stop signals. It's another way to have fun while becoming fit!

A. Ideas for leaders

- . walk backwards
- . hop, skip, gallop
- . do squat thrusts
- . run in place
- . race-walk
- . walk carrying books on your head
- . do walking steps sitting in a chair
- . balance things on your hands or feet
- . walk, crossing your feet back and forth along a rope

B. Make your own map

Measure some distances around school: from your class to the library, from the library to the playground, anywhere you like to go. Use a yardstick, a meter stick, or a 10-foot rope to measure the distances.

Draw a map on paper. Color in the routes you measured. Write down the distances in yards or meters.

C. Make a mystery trail

Everyone in the class should think of an exercise clue. Write it on a paper and fold it. Each student gets three clues and does what they say.

Example: walk 20 steps
hop 5 times
do 10 arm circles

D. Shuttle run

For speed! Set up two lines about 30 feet apart. Run back and forth between the lines as many times as you can.

Be Fit--Feel Good

Skill Exercises

Fitness

Puddles says:

Want to have fun, boys and girls? Then follow the leader while these kids show you how to do some fitness walks called animal walks. Naturally, the first one is about a dog!

1. **Lame dog walk**
Have two hands and one foot touching the floor. Keep the other foot off the floor as you hop or walk.
2. **Crab walk**
Hands and feet touch the floor. Walk face down or try it face up. Try it head first or feet first.
3. **Spider walk**
Walk forward on elbows and knees.
4. **Seal walk**
Cross legs behind you. Walk on your hands and drag your legs.
5. **Duck walk**
Walk forward on knees with hands behind your hips.
6. **Frog jump**
Spring forward. Land on your hands and then your feet. Continue jumping, hands, feet; hands, feet.
7. **Snake crawl**
Slide on stomach. Pull with hands and push with feet and knees.
8. **Caterpillar crawl**
Slide on your back by pushing with your feet.

Have relay races using these animal walks!

How many times did you do each animal walk last week?

Get our your Fitness Record Chart. Look for the exercise called "Animal Walks." Every time you do an animal walk, check it on your record.

___ Be A Choosy Chewer

Warm-up Exercises

Fitness

Puddles says:

Food and fitness go hand in hand. One way to get into exercises is to warm up gradually. Stretch yourself!

Try these! Start a Fitness Chart.

A. Swaying

Stand with your feet apart. Hold both arms over your head. Sway from left to right. Sway from right to left.

Can you still keep your balance?

Try it on your back or stomach.

Swing and sway using only your legs!

B. Over pinwheels

Stand with feet slightly apart, arms at sides. Raise right arm above head. As right arm lowers, bring left arm up above head and over to the front.

Do the exercise fast five times. Increase your speed.

C. Arm circles

Stand with arms at your sides. Raise arms up, even with your shoulders. Do arm circles forward--five times.

Do arm circles backward--five times.

Can you do arm circles in front of you? Over your head? Try arm circles sitting in your chair!

D. Stretch high

Stretch up slowly. Bring your arms high over your head.

Can you stretch up on your toes?

Try stretching on your heels, in a sitting position, on your back, on your stomach.

E. Stretch low

Relax your head, neck and body. Bend over slowly. Hang your arms down.

Look at the floor. But keep your legs straight! Stretch down as far as you can.

Try it in a sitting position on the floor. Try it on your back with your feet out.

F. I'm tall, I'm small!

Form a circle with one person in the middle. That person keeps eyes closed.

The circle moves, first standing very tall, then bending, and so on. The teacher says, "Stop." The person in the middle guesses if the circle is standing tall or bending down.

If the guess is right, pick a new person to stand in the middle.

Exercise to Music

Fitness

Puddles says:

You know, I'm into this fitness idea. How about you? Are you in shape?

Do you want to be in top shape for sports and games? Then try this?

S - T - R - E - T - C - H your body every day. Do it to music you like, music with a beat.

Week 1 Do this every day. You can stand next to your desk.

Hop or run in place.

Bicycle ride, back on floor, legs in air.

2 minutes-- Sit on the floor and row.

Stand up and swim with both arms in turn.

2 minutes-- Rest. Sit quietly on the floor.

2 minutes-- Do the first four exercises again.

Week 2 Repeat all the exercises you did in week 1. But now, double your exercise time.

4 minutes-- Exercise.

2 minutes-- Rest.

4 minutes-- Exercise.

Week 3 Five Muscle Stretches--"The Flexible Five"

Stand up and do these together as a class:

1. Wall push-ups

Stand 12 inches from a wall with toes pointing forward, heels on the floor. Move right leg backwards 12 inches. Lean forward and hold for five counts. Relax.

2. Forward stretch

Sit with legs straight. Reach forward above and past toes. Hold for five counts. Relax.

3. Backward stretch

Kneel on both knees, lean back. Hold for five counts. Relax.

4. Knee pull

Lie on back, pull knee to chest. Hold for five counts. Do the same for the other knee. Relax.

5. Butterfly

Sit with feet together, knees bent. Push knees out with hands or arms. Hold for five counts. Relax.

It is not easy to do every stretch. Try to get better each week! Take out your fitness chart and keep a record of your progress.

Fitness Chart

Your name: _____

Choose up teams: 1, 2, 3 or 4.
Color in your team mascot.

Personal record sheet--

The idea is not to beat others.
It's to be fit and improve your
own time.

Keep a record of your fitness:
X in every square if you did it.
O circle it if you had fun.

Color it in for every time your score improved or you tried your best.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Warm-up exercises pinwheels swaying arm circles stretching								
Exercise to Music Flexible five	---	---	---	---	---	---	---	---
Animal walks (Pick four)								
Relays pass and kneel orange pass paper race								
Orange and greens relay								
Race and run trail 100 meters 200 meters 300 meters								
3-station exercise trail improve your time double the exercises practice counting	---	---	---	---	---	---	---	---
Look, choose, and twist game								

FOODS ATHLETES AND PHYSICALLY ACTIVE PEOPLE EAT

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
3. Each student will interview a person with a regular exercise schedule to ascertain their schedule and to find how their diet is related to their activities.	1. Students will select one person to be interviewed. The interviewee need not be a professional athlete. Any of the following will probably do: jogger, basketball player, weight lifter, swimmer, tennis player, boxer, wrestler, baseball or softball player, marathon runner. (K-6) 2. Students will interview their chosen person to find out the following information: a. What is their athletic schedule? b. How do they keep fit in order to participate in their chosen sport? c. What special foods or diet do they use to help them participate in their chosen sport? (K-6) 3. Students will share the findings from their interviews with other members of their class. (K-6) 4. If possible, have students interview the coach of a team to get the same basic information as Activity #2 above. What does the coach recommend to his or her players? What exercises are used to get the players "in shape for the season?"	

FOODS ATHLETES AND PHYSICALLY ACTIVE PEOPLE EAT

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
4. Students will plan a diet for an athlete.	1. Use the "Role of Nutrition in Athletics: Facts and Fads" as an introduction to this unit. Since the writing is on about the ninth grade level, you will have to adapt it as needed for your students use. Or, you may simply use it as a resource in planning the activities you will use to plan a diet. (K-6) 2. Students will use the interviews from Objective 3 in deciding on a diet for one of those athletes, or students may compose a questionnaire to be sent to famous professional athletes in order to ascertain their diets. (2-6) 3. Students will review the basics of a good diet such as the basic four food groups and good nutritional values. Some activities detailing the basic four good groups have been inserted here for this purpose, although you may go back to "Foods We Eat at Home" for this information. (K-6) 4. Students will utilize all the information gathered in this module to plan a menu for the athlete of their choice. Teachers can use the "A, B1, B2,	1. New York Times (4/13/83) by Marian Burros 3. Basic Food Guide Bodywork, p. 180-181 4. National Dairy Council pp. 1-4

FOODS ATHLETES AND PHYSICALLY ACTIVE PEOPLE EAT

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
4. (Continued)	and C's of Menu Planning" to guide students in this activity. (K-6)	
	5. Students will, if possible, work with the cafeteria manager to prepare one of the menus developed in Activity #4. (4-6)	



Role of Nutrition in Athletics: Facts and Fads
By Marian Burros

Capt. William Watkins, on leave from the Army to train for the 1984 Olympics as a cyclist, takes vitamin E because he thinks it "helps my recuperative powers," calcium and potassium supplements "because I perspire a lot," and vitamin C for colds and a multivitamin supplement because, he says, "I'm a superstitious athlete."

At the same time he eats a carefully controlled diet with very little fat, small amounts of fish and chicken for protein and a lot of complex carbohydrates such as fruits and vegetables, breads and pasta.

David Falkner of East Brunswick, N.J., like Captain Watkins, is living at the United States Olympic Training Center in Colorado Springs. A judo player, he tries "to eat as many meats as possible," he says, though he stays away from fried foods because he has heard they are not good for endurance and are hard to digest. He also takes vitamin C, although he isn't sure why, and desiccated liver tablets because he has been told they aid endurance.

"When I've had a real hard workout, I'll take potassium and calcium," he says. "If you lack potassium and calcium, your muscles won't contract; you lose endurance."

Both Captain Watkins and Mr. Faulkner are following in the time-honored tradition of athletes the world over: they are searching for the competitive edge--the technique, the potion, the trick--that will improve their performance. This makes them particularly susceptible to every nutrition fad, from bee pollen and pangamic acid to caffeine and protein powder. They have a store of myths and advice handed down from their fellow athletes, their coaches and trainers.

While efforts to dispel these myths have been increasingly successful in the last few years, progress is slow. One reason is that there is disagreement among the recognized experts--the sports-medicine physiologists and nutritionists--over the value of some therapies. What is more, those experts cannot guarantee that athletes will perform better if they follow an optimally nutritious diet and dispense with the fads. All they can say with certainty is that some dietary practices--such as taking megadoses of protein powder or fasting to lost weight--will hurt performance. Sensible nutrition for the athlete is beginning to overrun such fads as the use of salt tablets. Slowly but surely, athletic teams and individual athletes are turning to registered dietitians for advice.

But for every athlete who has learned the importance of increasing complex carbohydrates and decreasing fat, at least a dozen are still doing it the other way around. The typical training table is still steak and potatoes and not vegetables, grains and small amounts of chicken or fish.

To impart sensible information to athletes, nutritionists must overcome the prejudices of many coaches and trainers who may still put salt tablets on the training table next to the steak and may not let their athletes drink liquids during practice or play.

Such trainers as Ronnie Barnes of the New York Giants, Herman Schneider of the Chicago White Sox and George Sullivan of the University of Nebraska, as well as high school coaches scattered around the country, are in the forefront of a movement to teach athletes how to eat sensibly. And now athletes at the Olympic Training Center are working with a nutritionist on a part-time basis.

Over the last 10 years an increased interest in better nutrition to improve the quality of life and extend the life span has developed in this country, and the Government responded by issuing "Dietary Guidelines for the United States." The booklet has been widely circulated and is now the basis for most professional dietary advice.

The guidelines call for some basic changes in eating patterns, including the increased consumption of complex carbohydrates to 55 percent of the total caloric intake and the decreased consumption of fat to 35 percent, with the consumption of protein remaining at 10 percent. They also suggest a reduction in sodium and sugar consumption and moderation in the use of alcohol.

As valuable as these suggestions are for the general population, they appear to have even greater significance for athletes--not only for improved performance but also for a lifetime of better health.

Research has shown, for instance, that the average age of death for former professional football players is about 54. Some experts have suggested that at least one reason for premature death is that these former athletes continued bad eating habits long after they were active players. They consume just as many calories, most of them from fat, and become badly overweight, with fat-clogged arteries.

When they are active, athletes need large quantities of carbohydrates to make glycogen, the muscle sugar that gives them the energy to engage in sustained physical activity. Fat and protein do not create glycogen. The greater the endurance required for the sport, the greater the need for glycogen.

Now there is increasing evidence that the amount of body fat has a lot to do with athletic performance; generally, the lower the percentage of body fat, the better the performance. Different sports, of course, have different requirements.

The average optimum percentage of body fat for a normal man is 12 to 16 percent. For a male long-distance runner it is 4 to 8 percent; for wrestler 7 percent; for a baseball player 8 to 13 percent, and for a football player (depending on the position played) 6 to 18 percent.

Women have a higher percentage of body fat. The optimum percentage for a long-distance runner is 12 to 15 percent; the average woman has 22 percent.

The New York Giants football team has sought the advice of a registered dietitian, Merle Best, on how to reduce fat in the players' diets--and consequently in the players themselves--and how to improve their performance through proper eating.

"We turned to nutrition to help eliminate fat-producing items in the diet," Mr. Barnes, the team's trainer, says. "We have been able to show the players that if they reduce their body fat, they perform better. The ones with the proper body fat are the best performers."

This message is not universally acknowledged. Dr. Sarah Short, a professor of nutrition at Syracuse University, has made diet analyses for the members of 16 different teams.

"Even though I talk to the athletes," she says, "and they are in my classes, when I follow them around and see them at the training table, I know they don't listen to me. They eat a lot of fat and cholesterol."

"No matter what I say I cannot convince them protein does not build muscle, that training does, because that's what they've been told since they were in first grade. They listen to the coach first and the trainer second."

The responses of athletes to nutrition information seem to be related, at least in part, to the sport in which they participate. Sports-medicine physiologists and nutritionists agree that wrestlers and other athletes who must qualify for a certain weight class abuse their bodies more than other athletes. So do gymnasts, particularly female gymnasts, who are often encouraged to look as thin as possible.

Dr. Charles Tipton, professor of physiology and physical education at the university of Iowa, says: "Probably one of the greatest problems in sports medicine is wrestlers making weight," getting down to the weight class in which they wrestle. The University of Iowa has won the National Collegiate Athletic Association's wrestling championship six straight times.

In order to get down to their weight category, Dr. Tipton explains, wrestlers fast, force themselves to vomit, take diuretics and run around in rubber suits. According to Dr. Short, they may put on 20 to 30 pounds after a meet, all water weight.

Wrestlers usually compete in a category 15 to 20 pounds below their normal weight. Dr. Tipton estimates that 82 percent of all the collegiate wrestlers fall into the classes below 150 pounds, which means the competition is exceptionally keen. "They believe they can lose weight, and there are no consequences," he says. "They don't believe they are any weaker."

On the contrary, Dr. Tipton believes, wrestling is a sport that should have a rule that "making weight may be injurious to your health." Hungry, dehydrated wrestlers--or any other kind of athlete--are weak and cannot perform at their peak. In addition, dehydration causes sluggishness, and there is some evidence that dehydrating and rehydrating may affect muscle performance.

Athletes who participate in endurance sports appear to have the best understanding of sound nutrition, even though they, too, indulge in fads. Bill Watkins is a prime example.

While he takes nutrition supplements, he also eats sensibly. He has reduced the fat in his diet significantly since last year when he had a computer analysis done on seven days of meals and discovered that, even though he was following a vegetarian diet, he was consuming 40 percent of his calories from fat. As a cyclist, he wants to have as little body fat as possible, about 5 percent.

"To get there," Captain Watkins says, "you have to know about nutrition." He takes in most of his calories through complex carbohydrates, which make up 65 to 70 percent of his diet. His protein comes in the form of fish or chicken.

Captain Watkins says he feels "3,000 times better" since he changed his eating habits. "Now I have a feeling of quickness, ease of movement," he says. "I can stretch well and breathe well."

Herman Schneider, trainer for the Chicago White Sox baseball team, believes a nutrition consultant has improved his players' performance.

"The diet program," he says, "has made a difference in the way we play." Early last year, Mr. Schneider consulted Anne Grandjean, a nutritionist with the Swanson Center for Nutrition in Omaha, because one of the team's star players, whom Mr. Schneider would not identify, was losing weight each season. As his weight declined, so did his effectiveness.

Mrs. Grandjean put together a dietary program for the player that included a high-calorie liquid drink to keep his weight up. She also planned diets for each of the White Sox and had them cut down on the amount of red meat they ate--from once a day to once every 10 days. Instead, they now eat fish and chicken and have increased their intake of carbohydrates, eating much more pasta and bread.

"The overweight players who lost weight have better reflexes now," Mr. Schneider said. "They are less sluggish." And the player who had been losing weight during the season is now able to maintain it and doesn't get tired during a game.

Mrs. Grandjean has also been working on a part-time basis with the Olympic athletes training in Colorado Springs. She has taken an inventory of their diets and advised them on what to change to achieve the full complement of their daily nutrient needs and how to control their fat intake.

Like other nutritionists, Mrs. Grandjean has had limited success convincing the athletes to stop taking so many nutritional supplements. Even though Belinda Binkley, a judo player from Barstow, Calif., has consulted Mrs. Grandjean, she takes a number of supplements: vitamin C, alfalfa, iron, zinc, calcium and a multiple vitamin. The vitamin C "is for colds," she says, and the calcium is to prevent "my body from cramping up." The other? "I don't know about them," she confesses.

A Checklist for Athletic Performance and Nutrition

By Marian Burros

Here is a list of facts and nutritional theories about athletic performance, representing a consensus among the experts:

- . The optimal diet for an athlete is one that contains protein, approximately 10 to 12 percent; fat, 30 to 35 percent or less, and complex carbohydrates, 55 to 60 percent or more. If this diet is chosen from a variety of foods, there is no need for any nutritional supplements.
- . When an athlete needs to replenish a certain vitamin or mineral, he or she should do it by adjusting the diet, not by taking supplements. The best sources for potassium, for instance, are fruits such as bananas and oranges.
- . Taking unneeded supplements of many vitamins and minerals can cause deficiencies of other vitamins and minerals. Taking more than the daily requirement of thiamine, for example, may create a deficiency in niacin and riboflavin.
- . Taking salt tablets aggravates dehydration.
- . Megadoses of protein supplements cause dehydration and a loss of potassium. They also put an extra load on the kidneys and can cut down on endurance.
- . Megadoses of the fat-soluble vitamins A and D can cause undesirable side effects including headaches.
- . Pangamic acid, also called vitamin B15, is not a vitamin, by definition, because no human need for it has been established.
- . No sweets or sweetened soft drinks of any kind, including products like Gatorade--in fact, no food at all--should be consumed two hours before exercise. Sugar causes an insulin response and cramping in the gastrointestinal tract.
- . Only water, tea or black coffee should be consumed two hours before participation. But the best liquid to drink, before, during or after exercise, is water. Sufficient quantities of water should be consumed while participating in a sport to prevent dehydration.
- . There is no evidence that bee pollen improves performance, and it can be a serious problem for people with allergies.
- . Iron deficiency can detract from performance because the oxygen-carrying capacity of the blood is reduced.
- . Desiccated liver, usually taken as a concentrated source of vitamins, is also a concentrated source of fat-soluble vitamins. There is no proof it improves performance.

- . It is not necessary to deplete the amount of carbohydrates in the body prior to carbohydrate loading. Carbohydrate loading, common among endurance athletes, involves eating large quantities of carbohydrates several times a day for three days prior to an event.
- . Natural vitamins are not superior to vitamins synthesized in the laboratory.

Other nutritional theories are controversial, and the experts disagree on their merits. Among these are the following:

- . There is some evidence that 250 milligrams of caffeine--the equivalent of a cup of coffee--aids endurance. According to some research, caffeine causes the release of free fatty acids, sparing some glycogen--muscle sugar. This means the athlete can perform longer.
- . There may be a loss of zinc in athletes who sweat a lot. Poultry, and eggs are a good source of zinc.
- . There is some indication that female athletes who have amenorrhea--meaning that they do not menstruate--may be deficient in calcium and are suffering bone loss.
- . Some nutritionists contend that a deficiency in vitamin E, which processes oxygen, can impair performance. Others say such a deficiency has never been demonstrated. It has been shown that extra vitamin E increases performance at high altitudes. Whole grains, dried beans and green leafy vegetables are a good source.
- . The evidence is inconclusive about the value of vitamin C for improving performance, although there is no question that a deficiency may hamper performance.
- . Many athletes, especially those participating in more strenuous events, need large amounts of calories--many more than they would consume in meeting their Recommended Daily Allowances for other nutrients. While most nutritionists agree that these calories should come from carbohydrates, they do not agree on whether they should be from simple carbohydrates (grains, fruits, vegetables).

Some experts believe that any carbohydrates are satisfactory because they turn into glycogen needed for endurance. Others say it is more efficient to take in the extra calories from complex carbohydrates because they contain the vitamins needed to make the glycogen work more efficiently.

There is also the possibility that consumption of simple sugars increases insulin secretion and could clear sugar from the blood to muscle tissues too rapidly. But even those who believe complex carbohydrates are preferable acknowledge that it can be difficult to consume enough calories from them.

The Big Four

How can you choose the foods that have what you need? The Four Food Groups are one answer. The Four Food Groups put similar foods together into categories. Each category or group contains foods that are rich in the same nutrients. These Four Food Groups are easy to recognize--

- I. Fruits and Vegetables
- II. Grains (breads and cereals)
- III. Milk Products
- IV. Beans, Nuts, Meat, and Eggs

Nutritionists have figured out how many servings of each food group you need for a balanced diet. If you eat the right number of servings from each of the four groups each day, you'll meet your nutrient needs. That makes choosing food a lot easier.

It's still not a perfect system. All foods within a group are not exactly the same. Foods within a group can vary in their nutrient values. Some foods within a food group are better choices than others, since they give you the nutrients you need with the least sugar, salt, fat, or processing. For example, milk and ice cream are in the same food group. Ice cream gives you the same kinds of nutrients as milk but fewer of them and lots more sugar and fat that add extra calories per cup.

Some foods are grouped into a fifth category called "Other" because they have few nutrients and offer little more than fat or sugar which add calories. The following chart will help you choose the best foods from each group.

____ Bodyworks

Four Food Groups--Choices for Children

	Any Time	Sometimes	Now and Then
I. Fruits and Vegetables			
Good sources of vitamins A and C, calcium and iron. Fruit juices (unsweetened) You need 4 or more servings a day.	Fresh fruits and vegetables Canned fruits (in own juices) Canned vegetables Vegetable juices	Canned fruits (in syrup) Fruit juices (sweetened) Potato chips (with salt) Dried fruits like raisins or apricots	French fried potatoes Olives Pickles
II. Grain (Bread and Cereal)			
Good sources of B vitamins, iron and protein, etc.) You need 4 or more servings a day.	Whole grain bread and rolls Oatmeal Pasta (spaghetti, enriched) Rice Whole grain cereals (except granola)	Granola cereals (may be high in fat or sugar) White bread Low sugar cereals	
III. Milk Products			
Good sources of protein, calcium, vitamin A and D, and riboflavin (B vitamin). Buttermilk You need 3 to 4 servings a day.	Low-fat or skim milk Yogurt (plain) Cottage cheese (plain) Skim milk cheese (blue, brick)	Yogurt (sweetened) Frozen yogurt Whole milk Hard cheeses (cheddar, muenster, Swiss,	Processed cheeses (American cheese, etc.) Ice Cream Ice milk Cheesecake

	Any Time	Sometimes	Now and Then
IV. Beans, Nuts, Meat and Eggs			
Good sources of protein, minerals (like iron) and B vitamins.	Peanut butter Chicken or turkey (no skin) Fish (fresh or frozen) Shellfish Tuna (canned and drained) Dried peas and beans	Eggs Fish (canned, salted, pickled or smoked) Beefsteaks, roasts, stews or hamburger Ham, veal, pork or lamb Chicken or turkey (with skin)	Lunch meats (corned beef, ham, salami, liverwurst, etc.) Hot dogs Sausage Bacon
You need 2 servings a day.			
Other		Mayonnaise Salad oils Margarine	Butter/Cream cheese Cream/Sour cream Coconut or palm oil Packaged pastries Doughnuts Juice drinks Soft drinks Candy Deep fried foods

Any Time =
any time you like

Sometimes =
2 - 3 times a week

Now and Then =
one a week or less

An Apple a Day

Look at one of your meals--breakfast, lunch, dinner and snacks--to see if you're eating enough foods from each of the Four Food Groups.

1. Make a chart like the one below to keep track of your meals.
2. List the foods and number of servings you eat in each of the Four Food Group categories on your chart. The Four Food Groups Chart in this chapter can help you decide the correct categories.
3. Count up the number of servings you had in each food group for the whole day.
4. Did you eat enough servings in each food group to have a balanced diet for the day? In which groups are you low? How many foods did you have in the "Other" category?

Look at the Four Food Groups Chart for suggestions of foods you can eat to fill your food group needs.

I. FRUITS AND VEGETABLES	orange	pizza: tomato sauce green pepper	Fruits and Vegetables 4 servings
II. GRAINS	corn flakes	pizza crust	Grains (bread and cereals) 4 servings
III. MILK PRODUCTS	milk	pizza cheese	Milk Products 3 servings
IV. BEANS, NUTS, MEAT & EGGS		pizza sausage	Beans, Nuts, Meat and Eggs 2 servings
V. OTHER	sugar		

The A, B₁ B₂, C's of Menu Planning
Teaching Plan

Activity Synopsis

Students plan a day's menu for the hypothetical Jones family which must satisfy individual RDA nutrient allowances and take into consideration personal food preferences.

Activity Outcomes

After completing this activity, the student will be able to:

- Assess diet and activity programs
- Analyze factors (personal preferences) affecting food choices

Note

- Students add decimals in this activity. This activity also assumes students are familiar with the leader nutrients and their sources.
- For maximum educational impact, introduce activity

Activity Terminology

- Recommended Dietary Allowances (RDA)

Estimated Teaching Time

One class period (approximately 40-55 minutes)

____ National Dairy Council

Teaching Plan

1. Introduce this activity as an opportunity to develop menu planning skills.
2. Quickly survey the class, asking:
 - How many of you have ever planned a menu for your family?
 - When you planned the meal, how many of you considered each family member's food likes and dislikes?
 - How many of you thought about your family's nutritional needs?

Introducing the Joneses and RDA

3. Let the class know that they will be planning menus today for the Jones family.
4. Distribute a copy of the Keeping Up with the Joneses data sheet to each student. Read, or have students read, the data sheet instructions. Answer any questions students may have.
5. Divide the class into 8 groups. Assign each group a member of the Jones family.
Point out that each group will be planning a menu for a day for their assigned family member. And that the groups will be focusing on meeting the RDA for the nutrient listed for their family member on the data sheet.
6. Distribute a copy of the Recommended Dietary Allowances data sheet to each group.
If the class is unfamiliar with the RDA, explain that:
 - The Recommended Dietary Allowances, or RDA, are recommended amounts of essential nutrients to be eaten each day.
 - These recommendations were established and are updated periodically by the Food and Nutrition Board of the National Research Council.
 - The RDA are designed to meet the known nutritional needs of practically all healthy people in the United States.
 - Different recommendations are made for various age/sex categories.
7. Ask each group to find their Jones family member's age/sex listing on the Recommended Dietary Allowances data sheet. Caution the group working on Grace Jones to also find the pregnancy listing on the chart.

Now have the groups locate the amount of the assigned nutrient recommended for their family members.
8. Explain that each group will be planning a day's menu for their family member which meets the RDA for that nutrient.
9. Give the groups approximately 20 minutes to plan their menus.
10. When a group is finished, have someone from the group write the menu on the chalkboard. Have students include the nutrient value of each food item selected (for their assigned nutrient only). Also have them total that nutrient intake for the day.

Presenting and Discussing Menus

12. Ask a representative from each group to describe the menu planned, pointing to the menu on the chalkboard. Also have the representative give the rationale behind the food selections.
13. When the representatives finish, ask students a few of the following questions about the Jones family and themselves:

Quincy:

- How much vitamin C is recommended for children of Quincy's age? 45 milligrams a day. (Point out that 1/2 cup of orange juice would have satisfied Quincy's vitamin C needs.)
- Quincy will not drink orange juice. What foods did you include in your menu which supplied vitamin C? Answers might include: spaghetti, peas, tossed salad, mashed potatoes, tomato soup, banana.
- Do you get enough vitamin C in your own diet?
- Tow-year-olds often have smaller appetites than teenagers and adults. Do you think Quincy will have problems eating all the foods you've selected for him?

Shirley:

- Shirley skips breakfast because she's on a diet. How many of you skip breakfast?
- Is Shirley saving many calories by avoiding milk and ice cream and skipping breakfast?
- If Shirley was looking for dieting advice, what changes would you suggest she make in her eating habits?
- Do you think it's possible for Shirley to meet her body's nutritional needs and still lose weight?
- Milk and ice cream are good sources of riboflavin. What foods did you include in your menu that were also good riboflavin sources? Answers might include: spaghetti, tomato soup, meat loaf, cottage cheese, scrambled egg.

Tom:

- Tom Jones takes a lunch to school. How many of you bring your lunch?
- When you planned Tom's sack lunch, did you have to limit your food choices?
- How would you carry spaghetti or soup to school? In a thermos or a plastic container to heat foods up in a microwave oven, if available.
- Did you have any problem getting enough protein for Tom?
- Why do men need more protein than women? Men are, in general, larger than women.

Grace:

- Morning sickness, like Grace's problem in eating solid foods for breakfast is common during the early months of pregnancy. How did you solve that problem for Grace? Answers may include: eating saltine crackers, eating smaller meals, avoiding liquids.

- Why does Grace need larger amounts of iron and other nutrients so early in her pregnancy? To supply her baby with the nutrients it needs to grow.
- Did you give Grace an iron supplement or were you able to provide enough iron from food alone?

John Paul:

- John Paul doesn't like vegetables. How many of you tend to avoid eating vegetables?
- How did you get enough vitamin A in John Paul's meals?
- Can you suggest any main dishes John Paul might like that include vegetables?

Lee:

- Mrs. Jones broke her leg. Do you think she'll be able to prepare the breakfast and lunch you planned for her by herself?
- Women of Lee's age need about 1 milligram of thiamin. What foods in your menu are good sources of thiamin? Answers may include: apple pie, oatmeal, spaghetti, peas, tomato soup, hard roll, meat loaf, orange juice.
- Lee insists on having some chocolate every day. How many of you are chocolate lovers?
- How do you feel about Lee's craving for chocolate? Is there a place for sweets in a nutritionally adequate diet?

Mary:

- What foods did you avoid when planning her menu because they are too spicy? Spaghetti, bologna.
- Did you have any problem getting enough calcium in Mary's diet?
- Why does Mary need less calcium than Shirley, Tom, and other teenagers? Calcium is used to form bones and teeth. And Mary's bones are not reforming as quickly as Shirley and Tom's bones are growing.

Jack:

- Did you have any problems finding enough soft foods for Jack to eat?
- How could you prepare an apple so it would be easier to chew? Answers may include: apple juice, applesauce, baked apples.
- Why does Jack need fewer calories than his son John Paul? They're both about the same height and weight. Jack is probably not as active as his son is. And his basal metabolic rate decreases with advancing age.
- Do you need more calories or less than Jack?

14. End the activity by pointing out that it is possible to meet a family's nutritional needs while taking into account personal food preferences.

Conduct a brief brainstorming session. Have students suggest factors, in addition to nutritional needs, that should be considered when planning a menu. (Write student responses on the chalkboard.) Factors might include:

- Taste and eye appeal of foods
- Size and age of family members
- Time available for shopping and preparing foods
- Storage and cooking facilities
- Skill in preparing and serving foods
- Season of the year and weather

- Geographic location
- Cultural background
- Religious and family customs

15. Collect the data sheets, and group menus (if written down).

Evaluation

Circle the correct answer.

1. Milk, ice cream, and which of the following are good sources of riboflavin?
 - a. Coffee
 - b. Sugar
 - c. Cottage cheese
 - d. Soft drink
2. When planning a menu, keep in mind all of the following, EXCEPT:
 - a. The nutrient contributions of the foods
 - b. The size and age of those eating
 - c. Whether those invited are left- or right-handed
 - d. Each person's food likes and dislikes

Briefly describe how each statement would affect your food choices. (These are open-ended with no single correct answer.)

Example:

Season of the year--affects availability and cost of some foods.

3. Your geographic location
4. Your age
5. Your nationality
6. Meals eaten away from home
7. Nutritional contribution of foods

Going Further

- Have the class create a shopping list for the Joneses dinner.
Help students determine units of purchase (i.e., pounds of meat, heads of lettuce, pounds of potatoes.
- Prepare the entire Jones family dinner, or 1-2 specific dishes from the menu, in class.

Resources

- The Butterick Meal Planning Series. New York: Butterick Publishing. 1978.

This 2 filmstrip/cassette set also includes a teacher's guide, poster, spirit masters, and transparencies. It includes suggestions on using the RDA, 4 food groups, and meal patterns when planning menus. Other factors are also taken into consideration.

Keeping Up With The Joneses

There's never a dull moment at the Jones'. Mrs. Jones broke her leg when she tripped over Quincy, who was trying to get out of the way of a skateboard that flew out from under Grandpa, who landed on top of John Paul, who had just finished taking his bath with his submarine.

Anyway, Mrs. Jones called and asked if you would work out tomorrow's menu for 1 of the family members. Make sure, of course, that your person gets at least the Recommended Dietary Allowance for the nutrient assigned to you.

Everyone in the family is on their own for breakfast, lunch, and snacks. But the Jones family does eat dinner together. Mrs. Jones plans on serving the following meal tomorrow night:

Meat Loaf	Peas	Carrots	Mashed Potatoes
Hard Rolls with Butter		Tossed Salad with French Dressing	
Apple Pie with Ice Cream		Coffee, Milk, Soft Drinks	

Quincy

Age: 2
Nutrient: Vitamin C

Will not drink orange juice.

Shirley

Age: 14
Nutrient: Riboflavin

Is always dieting and doesn't eat breakfast. She has eliminated milk and ice cream from her diet. She drinks 2 glasses of cola a day and takes a sack lunch to school.

Tom

Age: 16
Nutrient: Protein

Suffers from the "munchies."
He's always hungry and will eat anything that doesn't move.
Takes a sack lunch to school.

Grace

Age: 22
Nutrient: Iron

Has trouble eating solid foods for breakfast. She also has problems with very large meals. Remember, she's pregnant.

John Paul

Age: 41
Nutrient: Vitamin A

Doesn't like vegetables--a typical meat and potatoes type.
Takes a sack lunch to work.

Lee

Age: 42
Nutrient: Thiamin

Loves chocolate and insists on having some every day.

Mary

Age: 60
Nutrient: Calcium

Can't eat spicy foods.
Limited to a bland diet.

Jack

Age: 63
Nutrient: Niacin

Has a chewing problem. Must limit his diet to soft foods. Starts off the day with 2 cups of coffee.

FOODS ATHLETES AND PHYSICALLY ACTIVE PEOPLE EAT

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
5. Students will use the diet developed in Objective 4 as a model for planning what they personally should eat for good health and proper nutrition as an active person.	1. Students will write down the menu they developed for an athlete in Objective 4 and use it as a model for their own diet. Students can use the following activities as a guide in developing their personal diets: a. Food Profile b. Dietary Guidelines (K-6) 2. Students will share their diet with others in the class. The class may want to make up a scrapbook or a newspaper outlining all of the diets made up by the class to share with others in the school. (K-6)	a. National Dairy Council b. Bodyworks, pp. 186-187

Food Profile

Eat it--it's good for you.

Why?

Because.

But why?

Because it's good for you.

Are some foods better for you than others?

Milk
Group

Meat
Group

Fruit-Vegetable
Group

Grain
Group

Others

Foods I like

Foods I hate

Foods that are
good for me

National Dairy Council

Dietary Guidelines: Changing the Food We "Chews"

Choices you have to make:

1. Look at your everyday eating habits by keeping a list of everything you eat for two days.
2. Establish dietary goals and try to stick to those goals for one week.
3. Decide on the kinds of changes you want to make in your regular eating habits.

The Select Committee on Nutrition and Human Needs, a joint committee of the Department of Agriculture and the Department of Health and Human Services, has studied the eating habits of Americans to see how well we do at choosing the proper foods for our health and well-being. After hearing the testimony of dozens of experts, the committee recommended several dietary changes that affect both children and adults. The committee's dietary guidelines encourage us to:

- . take in only as many calories of food as we use up in activities.
- . eat more fruits and vegetables and whole grains.
- . eat less refined sugar and fewer foods high in sugars.
- . eat less foods that are high in fats.
 - a. replace saturated animal fats with polyunsaturated fats.
 - b. eat less animal fat, eat more poultry and fish that beef and pork which are high in saturated fat.
- . eat less salt and fewer foods high in salt.

Think about the guidelines above when choosing your meals as well as your snacks.

Snack Choices

Anything you eat or drink any time of the day between meals is a snack. The best snacks are foods you would also eat at meals. Choose snacks that don't just give you "empty calories" or more calories than you need. Here are some snack suggestions for you to choose from:

Best Bets

Fruits: fresh fruits
canned fruits in their own juices
fruit juices, unsweetened
frozen fruit juice bars
applesauce, unsweetened
cider.

____ Bodyworks

Vegetables: fresh vegetables
vegetable juices.

Milk Products: Milk, especially low fat or skim
yogurt, fresh or with fresh fruit
cottage cheese

Sandwiches: tuna
chicken
egg salad
peanut butter

Other: Nuts and seeds, unsalted
whole grain or enriched breads
cereal, unsweetened, with milk
water

Good Choices

Milk Products: cheeses
yogurt, sweetened
frozen yogurt
chocolate milk
ice cream, ice milk, sherbet.

Dried Fruit: raisins
dates
apricots
prunes

Sandwiches: cheese
meat

Crackers and Cookies: cheese crackers
animal crackers
peanut butter crackers and cookies
graham crackers
oatmeal cookies

Cakes: angel cake
applesauce, carrot, and other fruit or vegetable cakes

Other: popcorn
nuts and seeds, salted

O.K. Once in a While

Tunch meats, ham, hot dogs
potato chips, corn chips, salted pretzels, salty crackers
commercial pies, pastries, doughnuts
soft drinks and imitation fruit drinks
chocolate and other candy

FOODS ATHLETES AND PHYSICALLY ACTIVE PEOPLE EAT

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
6. Students will plan and prepare a bulletin board detailing the activities of well-known athletes as well as those participating in the Special Olympics. This bulletin board should focus on the nutritional and physical fitness activities of the athletes.	1. Students will plan and prepare a classroom bulletin board detailing the physical fitness activities and nutritional activities of famous athletes and students participating in the New York City Special Olympics. Some sources of material and techniques are as follows: (K-6) a. Cut pictures out of sports magazines and newspapers. Match the picture with the correct sport. b. Go to the Special Olympics and take pictures of participating students. Interview the students about nutrition and physical activities. c. Collect articles and stories about sports personalities. Match them to pictures. Write about their nutritional activities if the story discusses that aspect of their training. d. Cut pictures from newspapers and magazines of physically active people and make a collage on the bulletin board. e. Tack up some of the previous activities from this unit. Focus on the diets of athletes and active people.	

FOODS ATHLETES AND PHYSICALLY ACTIVE PEOPLE EAT

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
7. Students who are wheelchair-bound will understand how they can attain reasonable physical fitness levels.	1. Students will read the "Health and Physical Fitness for Active Users" worksheet. 2. Students and teachers will use the worksheet and other activities in this unit to develop a physical fitness plan and a nutritional plan for each individual student. 3. Teachers may use sections of the Adaptive Physical Education (APE) Manual developed by the Division of Special Education, NYC Board of Education, 1983.	

Health and Physical Fitness for Active Wheelchair Users

Getting In Shape

- . Assessing Diet--individual daily food sources
- . Analyzing individual foods in terms of nutritive effects on body
- . Charting physical energy expenditures
- . Assessing the relationship between what is eaten and amount of available energy
- . Making dietary changes

Keeping Trim Through Activity

- . Ways of exercising (aerobics, sports, etc.)
- . Ways of expending energy without exercising (household chores, shopping)
- . Discovering hibernating muscles
- . Directing mental energy to work forgotten muscles
- . Improving balance and coordination

Moving Easy and Looking Good

- . Assessing functional ability of your wheelchair
- . Modifying size, height, and weight of your wheelchair
- . Discovering wheelchair choices
- . Determining which chair for what purpose
- . General care and maintenance of your chair

FOODS ATHLETES AND PHYSICALLY ACTIVE PEOPLE EAT

PERFORMANCE OBJECTIVES	ACTIVITIES	SOURCE
8. Students will compose and edit a parent's newsletter detailing information they have learned in this module.	1. Students will plan, compose, and edit a newsletter for parents. The newsletter might include: a. Articles about the importance of physical exercise. b. Articles about the importance of good nutrition for active people. c. Guidelines for planning a menu for athletes or active people. d. Interviews with some of the people interviewed for the earlier activities. e. A model diet for an active person. f. A chart showing foods that should and should not be eaten by active people. g. An article about physical fitness and nutrition for wheelchair-bound people.	

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